

THE CANADIAN PRACTITIONER
AND REVIEW.

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VOL. XXVI.

January to December, 1901.

541834
1902

TORONTO :
THE CANADIAN PRACTITIONER AND REVIEW CO.
1901.

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The Canadian Practitioner and Review.

VOL. XXVI.

TORONTO, JANUARY, 1901.

NO. 1.

Original Communications.

THE TREATMENT OF TUBERCULOSIS IN SANATORIA.*

P. H. BRYCE, M.D.,
Secretary Provincial Board of Health.

Mr. Chairman, and Gentlemen of the London Medical Society:

It was with unusual pleasure that I received your kind invitation to read a paper before the Society on a subject which is assuming so important a position in our ideas relative to the treatment of that most prevalent and fatal disease, tuberculosis. It is quite true that tuberculosis presents very different clinical appearances at the several periods of life; yet, as will appear in the mortality returns which are presented in the following table of deaths in Middlesex during the past five years, we may for practical purposes say that treatment in sanatoria of tuberculosis will be of that pulmonary form commonly known as consumption. Thus only fifty-eight deaths, including those under one year, are recorded for the first ten years of age out of the 673 deaths which were registered; or we may say that over one hundred deaths occur annually in Middlesex from pulmonary tuberculosis.

*Read at Convention in London.

2 TREATMENT OF TUBERCULOSIS IN SANATORIA.

DEATHS FROM CONSUMPTION, COUNTY OF MIDDLESEX, BY AGES AND SEX.

(For five years, 1895 to 1899, inclusive.)

Years		Under 10	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 and over	Age not given	Totals
1895	Males	1	6	25	13	9	9	5	3	..	71
	Females	2	12	20	11	8	10	3	..	..	66
	Totals	3	18	45	24	17	19	8	3	..	137
1896	Males	4	5	13	9	4	4	6	..	1	46
	Females	4	11	25	17	11	8	2	1	..	79
	Totals	8	16	38	26	15	12	8	1	1	125
1897	Males	5	7	9	10	10	5	6	1	..	53
	Females	7	10	23	14	12	5	3	1	..	75
	Totals	12	17	32	24	22	10	9	2	..	128
1898	Males	6	5	12	10	9	10	5	2	..	59
	Females	13	12	24	7	8	5	5	2	..	76
	Totals	19	17	36	17	17	15	10	4	..	135
1899	Males	11	6	15	18	8	7	8	5	..	78
	Females	5	7	20	16	6	8	2	6	..	70
	Totals	16	13	35	34	14	15	10	11	..	148
Grand Total	Males	27	29	74	60	40	35	30	11	1	307
	Females	31	52	112	65	45	36	15	10	..	366
	Grand Total.	58	81	186	125	85	71	45	21	1	673

But while this is true as regards actual deaths, it is not equally true as regards the proportion of different forms of the disease actually prevalent during the various periods of life. As expressed in a previous paper:

"The interest which the study of this disease has for us as medical men becomes increasingly great when we recognize how numerous are its varied manifestations, how insidious its beginnings, and yet, though so often slow its evolution, so fatally persistent in its progress. From birth to old age this disease is present, often obscuring as mists of the morning our vision in the diagnosis of the diseases of infancy, again seeming for the few short years of childhood to be dissipated as the

clouds at noonday, only to return once more with adolescence as a dark storm-cloud, too often bringing rapid ruin and destruction with it; or if such be delayed, then only to leave constitutions as shattered ships, gradually but surely breaking up until they finally disappear in the deeper gloom. So generally spread, indeed, are the germs of this disease that the physician must ever be prepared to see them taking advantage of the invasion of every acute disease, as when in typhoid, pneumonia or pleurisy they make the attack at some vulnerable point when the vital resistance of the patient is at its lowest point."

Realizing the truth contained in this paragraph, it is apparent that there must always be a large number of cases of incipient tuberculosis, which will not be recognized as such until some more acute manifestation of the disease places the patient in the hands of some physician. That even then many cases are not diagnosed is quite within the experience of all. It must, therefore, appear evident that the problem of the treatment of tuberculosis, from the standpoint of a cure, whether in a sanatorium or elsewhere, depends primarily, other things being equal, upon the stage at which the patient comes under medical observation. I have collected data from various sources of information which will be useful in our consideration of this very essential point.

STAGE OF THE DISEASE AT TIME OF DIAGNOSIS AND TREATMENT.

In the laboratory of the Provincial Board of Health, specimens of sputum are examined from all parts of the Province, with information supplied on postcards. Of 138 specimens, Dr. J. J. Mackenzie gave the following results:

DURATING SYMPTOMS (REPORTED).		POSITIVE.	NEGATIVE.
One month and under.....	18	16.6 per cent.	83.4 per cent.
One to two months.....	26	34.6 "	43.4 "
Two to three months.....	14	50 "	50 "
Three to six months.....	27	55.5 "	43.5 "
Six to twelve months.....	28	46.4 "	53.6 "
One to two years.....	8	62.5 "	47.5 "
Over two years.....	15	26.6 "	73.4 "

The results of the second laboratory period, ending October 31st, 1900, are included in the following:

Of the 591 specimens sent to the Provincial Health Laboratory in 10 months ending October 31st, 1900, 218 gave positive results, and 373 gave negative. Of 389, with data supplied, 149 gave positive results, and 240 negative results. Of 149 positive results, 69 were males and 80 were females.

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Number of patients giving positive results, by ages :

	16-20	21-30	31-40	41-50	51-60	61-70	Total
Male	11	24	15	13	6	0	69
Female	12	32	20	9	6	1	80
Totals	23	56	35	22	12	1	149

Table showing number of positive cases, arranged according to duration of symptoms when specimens were submitted :

	1 month and under	1-2 mo's	2-3 mo's	3-6 mo's	6-12 mo's	1-2 yrs.	2 years and more	No data	Total
Male	5	4	10	11	16	8	8	7	69
Female	2	3	11	19	25	7	10	3	80
Total	7	7	21	30	41	15	18	10	149

Roughly, the disease had existed in these up to two years; on an average, for fifteen months. It may be said that until very recently the larger proportion of cases of consumption were not diagnosed until the physical signs were well advanced. Dr. S. G. Bonney, Professor of Medicine in the University of Denver, has recently written regarding 546 selected cases in private practice, and states that "388 or 71 per cent. arrive in Colorado with distinct evidence of tubercular infection in each lung," also that "the total average period of delay from the time of definite onset of the disease was a little over eighteen months." Dr. S. Edwin Solly, of Colorado Springs, says that of one hundred successive cases

In 48 cases treated as soon as diagnosed	{	24	were in 1st stage
	{	14	" 2nd "
	{	14	" 3rd "
In 52 cases not treated for several months or	{	14	" 1st "
even years after onset	{	17	" 2nd "
	{	21	" 3rd "

Statistics still more valuable for practical purposes and more comparable to the results of the laboratory returns already referred to, are those of the Hanseatic Insurance Co., carried on under the Workmen's Compulsory Insurance Laws in Germany, where, of 1,541 cases treated between 1893 and 1897, 30.9 per cent. were slightly affected; while of the Bremen Insurance Co. in 1896, 279 patients were treated at the Reichburg Sanatorium, of whom 23.9 per cent. were slightly affected, 32.7 per cent. were moderately affected, and 43.6 were seriously affected. The Gravenhurst (Ont.) authorities have stated that not more than 1 in 8 cases, examined for admission, are in the first stage of the disease. But, further, Dr. Trudeau, of the Saranac Lake Sanatorium, in his last article published this year, states that about 33 per cent. of the 1,200 cases treated within the last three years were in the incipient stage. Thus, taking the more

exact German statistics and those of Drs. Solly and Trudeau, where patients were treated as soon as diagnosed, we may say that, with our present knowledge and the actual practice of the public in the matter of seeking medical advice, not more than 25 per cent. of patients are brought under treatment for pulmonary consumption until the disease is well advanced.

It is quite clear, therefore, that, in considering the sanatorium treatment of consumption, we must keep two distinct objects in view, viz.: (a) the cure of the disease, and (b) the prolongation of the life of the patient, and the removal of infectious cases from surroundings where they are a menace to the health of others.

If we assume that each of the 100 deaths occurring in Middlesex in any year represents the 75 per cent. of patients who were in the more advanced stages of the disease, and that, as we learn from the statistics of sanatoria, a large proportion of patients at this stage do not die during the year while at the sanatorium, as at Saranac Lake, it is probably within the mark to say that at least 200 patients are present in the county in an advanced stage of the disease during any year; and, hence, at the present time any sanatorium treatment will be directed chiefly to patients in advanced stages of the disease. This will be yet more apparent when we remember the distribution of cases in different sections of the community. Thus, in the returns for the city of Toronto during five years, I have found that at least 80 per cent. of the deaths occurred in the artisan and laboring class, and that of 1,555 deaths over 15 years of age, 1,211 died during the years when, if married, they would be rearing families; while 75 per cent. of the deaths of females were within the child-bearing period.

I have dwelt on these figures at some length, since they have a most important bearing upon the subject under consideration. It is, I think, quite evident that sanatoria must be considered as falling under two classes, viz., private sanatoria for the well-to-do, and sanatoria established under the provision of some statute similar to that passed by the Legislature for establishing municipal sanatoria in Ontario. While the principles of treatment of the phthisical in each case must be the same, there will, nevertheless, be differences in detail worthy of consideration. I shall, therefore, devote my remarks especially to the municipal sanatoria which we are seeking to establish, with the view both of curing the sick and prolonging their capacity for work, and of protecting their families against infection.

MANAGEMENT OF PATIENTS IN SANATORIA.

Anyone who has any knowledge of patients in public institutions knows that the success of the institution depends

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primarily on the person in charge of the everyday work, *i.e.*, on the superintendent; and, second, upon the rules which he is called upon to carry out. In the management of a sanatorium I shall take it for granted, as being beyond question, that the superintendent should be a physician. It might be said: Well, if a sanatorium is nothing more than a large boarding-house, where the patients are to live in a clean, well-kept home, and given good food, and such exercise as they feel inclined to take, of what use is a physician? This idea has prevailed, and in some countries still prevails with regard to insane asylums and other similar institutions; but in all progressive institutions we now find the insane are being looked upon as patients, to be studied and treated with a view to cure in the same manner as any other patients. Such is the idea which has led to the success of the modern sanatorium treatment in the case of the consumptive. Hitherto he had been looked upon as incurable, and the most to be done was to make his life as comfortable as possible. Now, while we cannot hope to cure all the insane, and certainly do not expect to see all consumptives recover, yet the very success of our efforts in this as in all other work will depend upon the conviction which the superintendent has of the curability of the disease.

In the establishment of a municipal sanatorium, two things must be kept in view--that patients in the primary stage of the disease must be expected and provided for, and that patients who are in the advanced stage of the disease must be admitted in yet larger number, for a time certainly in the proportion of one to two. It may be mentioned in passing that two of the best known sanatoria on this continent, Saranac Lake and Gravenhurst, insist that only patients in the primary stage be admitted, or only such others with a history which presents the hope of cure or at least of great amelioration. Hence, at neither is there provided practically any separate hospital provision, since patients are strongly advised, if doing badly or incurable, to go home. In a municipal sanatorium, on the other hand, our object is not only to cure patients but to protect households; hence for this class of patients a very definite amount of hospital provision must be supplied from the first. The erection of a cottage hospital, therefore, becomes necessary, not only for this reason, but also in the interest of patients who are not advanced in the disease, in which the neurotic element forms so important a factor. Hopefulness and despondency must constantly be dealt with as symptoms where it will try all the resources of the expert physician to maintain hope dominant rather than despair. Thus the evil effects of lack of supervision are well illustrated at the boarding-houses and winter resort hotels in the South.

1. Hence, the first rule which must be strictly enforced in a sanatorium is, that patients be not allowed to discuss their own or other cases with persons other than the superintendent or other proper officials. This is the starting point of that benevolent medical tyranny which patients must submit to in a sanatorium.

2. The second rule is but a corollary of the first, viz.: That systematic means must be employed to in every way provide mental employment of a wholesome character, and hence we come to a third rule.

3. The careful division of each patient's time by a time-card which he or she keeps regularly as a diary, and which the physician weekly or oftener examines at the time of his medical examination, and continues or modifies the daily routine laid down previously in accordance with the experience obtained from results. I have had some knowledge of private sanatoria in different parts of this continent, and am convinced that in no one feature is there such room for improvement in the routine methods as in the close oversight of the daily life of each patient.

4. Assuming that the patient has arrived at the sanatorium, it is apparent that a complete family and personal history should be taken, as well as a detailed history of the case as regards its duration, signs, symptoms, extent of infection, progress of the disease, and a detailed examination of all organs and secretions. As the patient is new to his surroundings, it is natural that a close daily observation of him for a short time should be necessary in order that the best line of treatment in his particular case may be accurately mapped out, being modified only as subsequent observations may dictate.

5. As many are aware, the sanatorium treatment of consumption dates back to at least sixty years, but the work of Dr. Hermann Brehmer, at Gorbersdorf, begun in 1859, is the first whose history has been continuous to the present time. Following him as a pupil and co-operator, Dr. Dettweiler, of the Falkenstein Sanatorium, has added much to the knowledge already obtained at Gorbersdorf, of the treatment which we now call "The Open Air Treatment of Consumption." It will of course be understood that the sanatoria are constructed with all the advantages theoretically supposed to aid in the fresh air treatment, such as perfect house ventilation, rooms exposed to direct sunlight, verandahs and solaria in proper and convenient positions, shelters in the grounds which may be turned away from the winds, walks through the grounds with graduated inclines, amusement rooms, and so on.

6. Actual treatment, as a rule, begins with the patient being placed in bed on his arrival and kept there, should the afternoon temperature rise to 100° F. or over; while the beds are daily

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wheeled to some large window or protected open balcony. Symptomatic treatment of the pyrexia is practised by some; but as a rule it is not advisable or necessary, as reliance must be placed on the improvement of the nutrition, and the quieting influence of fresh air on the thermic nerve centres.

7. When the fever has for several days been practically reduced, the rest cure proper begins, in the patient being allowed to recline on an adjustable reclining chair on a balcony protected by glass shelters in the direction of the wind. This treatment at many sanatoria is continued from 9 a.m. to 9 p.m., the patient then going to his bedroom, where, even in winter, the window is left open, a screen only keeping off the wind.

8. While it is apparent that the condition of the patient must determine how long this treatment is to continue, both theory and more recent practice point to the time when with improved nutrition and increased strength gentle exercise may with advantage be added to the treatment. This is first attempted, unless in cases with recent hemorrhages, by breathing exercises, which are not more than the simplest movements which are taught our school children, increasingly to the more complicated ones of our manual of military drill. As progress is made, walks for graduated distances, and at different inclines, are permitted, and finally games and recreation, as bowls, tennis, boating and cycling are indulged in in moderation, while at the municipal sanatoria it is found that a notable improvement in patients has taken place where light gardening, household work, basket-making, and similar light industries have been introduced. Both from the evidence in many cases where ranching or outdoor life in the mountains has been taken up by consumptives, as well as from our every-day experience of the effects of exercise on nutrition and reconstruction of tissues, there can be no doubt but that under wise supervision, both from the physical and mental standpoint, such employments play an important part in promoting cures. Indeed, Dr. Hans Weicker, of the Krankenhaus, at Gorbardsdorf, where a large number of work-people have been treated during the past five years, states that this class of patients improve decidedly more rapidly than the better classes, especially since some employment had been provided.

9. As adjuncts to treatment, some sanatoria have baths in which a more or less elaborate system of hydrotherapy is carried out according to the views of the medical superintendent. There is, perhaps, no sanatorium in which the benevolent tyranny is more exercised than at Dr. Otto Walther's sanatorium at Nordrach in the Black Forest. Walther trains his patients to stand even draughts, and makes the cold douche a means of giving resistance and tone to the peripheral circulation. Per-

sonally, I am convinced that the hot and cold bath play an important part if intelligently administered through improving the general tone and skin circulation; since it is common observation that the elimination of waste-products by the Turkish bath may safely go on without danger of a subsequent cold.

10. The question of the food of consumptives has been greatly discussed, and, as all are aware, much has been said which seems contrary to our observations and experience in the general question of assimilation and nutrition. At present, I believe it may be said that most physicians to sanatoria are agreed that a generous and nutritious diet, food well cooked, palatable and easily digested, is productive of the best results. We are all aware of the great change which has taken place in the feeding of typhoid patients. It used to be a standing order to give two quarts or more of milk daily, regardless of whether a diseased intestinal tract could assimilate a pint or not, ending, naturally, in discomfort, and the constant production of toxins. The same must necessarily be the case in the ill-regulated feeding of the phthisical. In nothing, however, will the personal and professional qualities of the physician be more tried than in this matter. The patients have already in most cases been suffering from dyspeptic troubles, especially of that persistent form, the intestinal, so closely associated with the neurotic type. Anorexia must be overcome by gentle persuasion, assisted more largely by the fresh air than all other agencies, and perhaps passive exercise and massage; while the use of lavage and the best intestinal disinfectants will prove of notable advantage.

11. The use of fats and oils, amongst which I would place first cod-liver oil, has been the subject of much discussion as regards their utility in the treatment of this wasting disease. We are all aware of the various theories regarding the emulsifying of fats through the action of the secretions, especially that of the pancreas, and may fairly assume that the amount of this, as of other secretions, is affected during an anemia, such as that commonly present in phthisis. Recent experiments seem, however, to make it clear that fats are absorbed in a soluble form as fatty acids, and that the biliary and pancreatic secretions simply increase the solubility of the fatty acids. However that may be, there is in my experience a very notable distinction to be made in the readiness with which the two forms of carbonaceous foods, the starches and fats, are assimilated by many persons, especially persons with a weak intestinal digestion. In the case of starches it is common knowledge that the patient of the neurotic type must use certain starches, as that of the potato, very sparingly if intestinal fermentation is not to result, and the constant use of white bread can, I

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believe, in such patients be often restricted with much advantage. On the other hand, it is common observation that persons of sedentary habits are increasingly refusing to eat fatty foods, as fat meats, butter being the only form of fat seemingly palatable. Now it has been a matter of personal observation that oils used, as olive oil in southern climates, in large amounts, and the best purified cod-liver oils can be used with the best effects in many patients to whom, owing to their not being a common article of diet with us, they may seem at first nauseating. Their utility, in my opinion, depends upon three distinct causes: (1st.) They serve, owing to their oily nature and to their being broken up in the intestine into fatty acids and glycerine, as laxatives and lubricants of the intestinal walls; (2nd.) They are but slightly acted upon by bacteria, although in the absence of bile and pancreatic juice they may be decomposed into fatty acids and be largely discharged unabsorbed. And (3rd), when they are absorbed by the columnar epithelium of the villi, they are carried directly to the central lacteals, and thence directly to the thoracic duct, instead of going, as in the case of starches and proteids, into the portal circulation for elaboration in the liver. What is of equal interest and importance is that fats do not increase the glycogen of the liver, and hence relieve that organ of the elaboration necessary to convert this carbohydrate into material assimilable by the tissues. Moreover, the simple constitution of the fats—that is fatty acids and glycerine—with the small amount of oxygen in their constitution, compared with starches, would seem to make them more readily converted into heat and energy by the oxygen conveyed by the hemoglobin of the red blood-corpuscles. I have thus at some length attempted to give my reasons for urging the increased use of the more palatable fats, since I am convinced that the habits of our more civilized life tend greatly to a decrease in their use to the detriment of the general health, and the tendency to wasting diseases, even in those not suffering for the moment from anemia or phthisis.

12. The question of the use of alcohol has been much discussed within recent years, followed by a growing tendency to its complete disuse as a means of reconstruction of tissue. Speaking exactly, I believe it may be said that its use, except in patients with strong digestions, is contra-indicated, except as a temporary stimulant, owing to its disturbing effects upon the glycogenic functions of the liver in the large proportion of patients of the neurotic type. If, however, ales and porters are well borne, I am of the opinion that they will prove of value as productive of heat and energy in the reconstruction of tissue.

13. With regard to the proteids, it is hardly necessary to say that meat, milk, eggs and similar articles of diet will be used up to the limit of their assimilation by the system.

14. Having dealt with the ordinary methods of treatment, it seems proper to refer to some of the details of special varieties of treatment developed within recent years. Among these I would refer first to that which, in patients deprived for a time of the privilege of active exercise, most nearly takes its place, viz., *massage*. Its value as an aid to the metabolic changes taking place in tissues cannot be over-estimated. Sir Michael Foster remarks: "In this way an enormous metabolism may be excited, and yet so carried on that the body gains both in flesh and fat," and illustrates this by a case where a patient in fifty days increased in weight from 45 kilos to 60 kilos, the average daily ration of 100 grammes of proteids having been increased to 150 grammes over the whole period. Where active exercise becomes possible this, of course, may be largely dispensed with.

15. The effects of reduced air pressure in the climates of high altitudes have been frequently commented upon, and in view of the physiological explanations given of such influence upon hemopoiesis, or the increase of red blood-corpuscles, and the deepening of the inspirations, we seem to have the best reasons for endeavoring to imitate such conditions by means of a room so constructed, with a gas engine arranged so that the air pressure can be reduced. Another apparatus which, while lessening the air pressure on the chest-walls, enables the patient to breathe air of normal density, is the "pneumatic cabinet." It varies in its details and completeness, but I am convinced that this direct means of deepening the inspirations and setting unused corners of the lung tissue to work, will have a definite therapeutic value if scientifically practised.

16. As regards the dress of patients, it need only be said that loose-fitting clothing, with flannel underwear of sufficient warmth, is all that is required; while, of course, care in protecting the feet by felt shoes and overshoes in damp or cold weather would be exercised.

17. As regards the symptomatic treatment of patients, it is impossible here to enter into details. The most that need be said is, that the various measures which every physician practises for dealing with the several phenomena presenting themselves in this as other diseases would be drawn upon. Nasal and throat abnormalities or diseases will demand appropriate remedies, hemorrhages, night-sweats, and the errors of digestion, must receive proper attention; and, indeed, our full armamentarium will be called into requisition in dealing with the emergencies arising in the many patients of a sanatorium.

18. Personal hygiene in the case of sputum, the careful disinfection of the buccal and nasal cavities, and the careful instruction of patients in all matters of personal control, will

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necessarily become an important part of the duties of a medical superintendent. He has not only to consider the life of his patient while under his supervision, but he must further inculcate such rules of life as will be most likely to be beneficial to patients when they return to their homes, and enter once more into some occupation. Much might be said on this point did time permit. Personally, I am of the opinion that in very few instances can patients return to the sedentary pursuits of urban life with safety. The very conditions of success in the air-cure seem to point to out-door occupations as being alone those where the maintenance of good health can fairly be expected. It may be quite true that such conditions will be difficult or impossible of fulfilment; but we are dealing with a condition rather than a theory.

In concluding these necessarily imperfect remarks, I cannot overlook the, perhaps, most important part sanatoria will play in lessening the fatality from tuberculosis. They are essentially prophylactic, first, by receiving patients from small, often insanitary homes, where they are not only possible but almost certain centres of infection. Thus of the 663 tenements in 1896 in a single ward in New York, 37 per cent. had one or more cases of consumption, there being 81 per cent. of cases to every house; while in a statistical study made of the deaths in Huron County for ten years—1889-1898—I found that 33 per cent. of the total 633 deaths were of persons having a name recurring two or more times. Thus sixty names occurred twice, twenty-five names thrice, ten names four times, two names five times, six appeared six times, and one was found eight, and one nine times. It is further found in answer to inquiries made on post cards accompanying specimens of sputum for examination in the laboratory, that a notable proportion report other cases at present existing, or having existed in the house.

But the sanatoria will prove a perhaps equally important factor in becoming educational centres from which persons will return to their homes and there preach the gospel of cleanliness. And, indeed, all evidence is going to show that our ideas of cleanliness will not avail to prevent danger of infection to the well where the expectorating consumptives live and are employed. Most stringent directions are given in sanatoria against coughing, except into some paper or cheese-cloth handkerchief which can be destroyed, since moist particles of sputum fly into the air, remain suspended for several hours, and when such disappear they deposit their bacilli on walls and floors to rise again as dust. Dr. E. R. Baldwin has published most interesting experiments where the washings taken without warning from the hands of ten private and eighteen

sanatorium patients at Saranac Lake were inoculated into guinea-pigs. Half the private patients used cuspidors and occasionally their handkerchiefs, the rest used cuspidors or cloths. The sanatorium patients all denied using handkerchiefs. Their hands had been previously washed within from ten minutes to twelve hours. Of the ten private patients eight were the means of inoculating either one or both of the test guinea-pigs. Of five sanatorium patients whose washings were injected, two infected one guinea-pig only, the disease resulting being of a very chronic and localized type. It was noted that it was the private patients who insisted upon the use of handkerchiefs who furnished the cases of severe infection. The lesson thus taught is obvious.

In conclusion I wish to refer to a matter which I have referred to before in speaking to physicians regarding persons in their practice whom they find tuberculized. We have already seen how large a proportion are not diagnosed until the disease has become well advanced. It is apparent that if further delay in taking prompt action occurs, the double injustice is done both to the patient and to those living with him.

I am quite well aware how inconsiderate such patients and their friends often are, and how a physician, after losing a few patients by his honesty, is slow to tell a patient the truth. But a wise discretion will, in most cases, result in retaining the confidence of the patient and family, while the consciousness of having performed a plain duty will be a source of personal satisfaction. I quote the words of Dr. Trudeau, of Saranac Lake, a man beloved by all who know him, and one than whom no one has devoted for twenty years more singleness of aim and scientific energy to the study of the protean phases of this disease:

"As soon as the diagnosis of tuberculosis is established, particularly if the bacillus has been demonstrated in the expectoration, no matter how well the patient may appear, he should at once be told the grave nature of his malady, and an immediate removal from his surroundings should be urged, while it is explained to him that the best and possibly the only chance of restoration lies in prompt action and the adoption of thorough measures. Although obedience to this advice undoubtedly necessitates great sacrifices on the part of the patient, he will, if it is at all possible, rarely hesitate to make them, provided the gravity of the situation is plainly laid before him and the necessity for prompt action explained; and if this is not done, he will be called upon to make the same sacrifices later, and when they can prove of little or no avail.

The position physicians take who purposely deceive

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patients as to the nature of their malady by telling them the bleeding comes from the throat, or that they have influenza, malarial disease, or bronchitis, is difficult to understand, and does the patient a grave injustice.

"It will be justly urged that in a great majority of cases among the poorer classes it is absolutely impossible for the patient to follow the advice given. This is greatly to be regretted; and while it in no way relieves the physician of the responsibility of making an early diagnosis, and advising prompt and radical measures to those who can afford to follow his advice, it is a strong plea for attempting to provide sanatoria for a greater number of these unfortunates, where they can find, at a moderate cost, the climatic and hygienic surroundings necessary for the treatment of their disease as soon as its presence is recognized."

It seems, therefore, evident that what the present situation demands for the treatment and prevention of this disease is before all things a recognition of its curability by prompt action in its early stage, of the certain danger to the patient in delay, and of a daily increasing danger to those with whom he is constantly associating.

To meet these several desiderata we may say that in practice, sanatoria properly constructed, equipped and officered, will alone be found adequate.

THE PREVENTIVE AND CURATIVE TREATMENT OF PULMONARY TUBERCULOSIS.

BY GEO. H. HODGE, M.D.,

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Mr. President, and Members of the London Medical Association :

The importance of the subject which we have met to discuss this afternoon is shown by a reference to the report of the Registrar-General of the Province of Ontario for the year 1898. It is there stated that from tuberculosis alone there occurred 3,291 deaths in 1898, while from such prevalent and dreaded diseases as typhoid fever, measles, scarlet fever, whooping-cough, diphtheria and pneumonia there occurred a total of only 3,014 deaths in the same period of time. Add to this the fact that many die of tuberculosis where the real nature of the disease is unsuspected and the deaths are set down to other causes, and the importance will be still further emphasized.

Is pulmonary tuberculosis curable? Most of us here can recall the time when it was looked upon as incurable, but there are at the present time few medical men in active practice who will venture such an opinion. Why this change of view with regard to the curability of phthisis? Let me answer in the words of Dr. J. Kingston Fowler in a lecture delivered at Brompton Hospital about one year ago:

"It is certainly not because of the discovery of some drug which will effect this result, because we know of none. It is because truth as to the pathology of the disease has displaced error and because now when we speak of 'pulmonary tuberculosis' all men know what we mean, whereas formerly when one spoke of 'phthisis' only the speaker knew (or thought he knew) what he meant. So long as a positive clinical test for tuberculosis of the lungs was lacking, those physicians—and they were neither few nor obscure—who believed in the existence of the conditions variously termed 'catarrh of the apex,' 'congestion of the apex' and 'the pre-tuberculous stage of phthisis,' regarded every case of the kind, in which the symptoms and physical signs disappeared and the patient regained health, as an additional proof of the soundness of their belief in the non-specific nature of the affections. They rarely observed the arrest of consumption, because if the patient got well it was almost certain that he could not be suffering from consumption. When, however, owing to the researches of Koch it became possible to apply such a test, the falseness of this view was speedily demonstrated, and to-day the discovery of tubercle bacilli in the

expectoration is accepted by all as a proof of the presence of tuberculosis of the lungs."

In order that we may treat this disease rationally, it is important that we should know its causation, its anatomy, and be able to recognize it early, as it is only in the early stages that we can hope for the best results in the application of the remedial treatment.

Etiology.—We are frequently asked by the laity, "Is phthisis catching?" The researches of Koch have enabled us to give an answer in the affirmative to this question. Even before the bacillus was discovered, the disease was looked upon as catching by Italian as also by some English physicians.

Another question that the laity frequently ask is, "If the disease is catching, how is it that so few comparatively contract it, although all must be exposed?" There is no doubt that of the many exposed only a few really develop the disease, which proves that while it is infectious, there is another factor in the causation of, at least, equal importance. This other factor is the susceptibility of the individual exposed, *i.e.*, there are in this, as in all other such cases, two factors—the seed and the soil.

How is the tubercle bacillus (the seed) disseminated? There is now no longer any doubt that the sputum is the chief means of dissemination. The room in which the patient lives may become infected and may thus become a factor in the spread of the disease. Patients who are able to go around and attend to business may infect others by carelessly expectorating on the street, or in the office or wareroom. While dried sputum is an undoubted and probably the chief means of propagating the disease, it is not the only one. Dr. Clifford Allbutt, in a paper read at the meeting of the British Medical Association in 1899, says: "The recent researches of Flügge make it probable, indeed, that the virulence and active diffusion of the microbe is secured more by the spray of the spittle than by the heavier and more voluminous parts of it. His experiments on the survival of the bacillus in the dry handkerchiefs of the consumptive patient went to show that therein lurks less peril than in what I may call the spindrift of the cough, some of which caught on slides hung before him, proved very virulent. The practical inference is that spittoons in living rooms, if not carried about, should stand on pillars some four feet high. . . . If then we may work upon the hopeful proposition of no tuberculous animal, no tubercle—that the bacillus is found only about tuberculous animals—we open out the amazing prospect of abolishing tuberculosis as in our own country we have virtually abolished leprosy."

Milk from cows whose udders are affected is a prolific source of tuberculosis, especially in children.

What are the conditions which predispose the individual?

1. *Heredity*.—I am aware that there is a tendency at the present day to minimize the importance of heredity as a factor in the causation of tuberculosis, however, I am fully convinced that it does play an important part. In all cases coming under my notice I make a point of ascertaining whether or not the disease has existed in either parent or other member of the family, and find that such is the case in a vast majority of cases. This cannot be a mere coincidence. In what way does heredity act? While it is possible that the bacillus may be transmitted directly from parent to offspring, yet this must occur so seldom as to enable us to ignore this means of propagation. The generally accepted view regarding heredity, and I believe the correct one, is that the parents transmit to their offspring a special liability to pulmonary tuberculosis.

2. Any condition which will induce loss of resisting power such as absence of fresh air and sunlight, damp, undrained ground, improper food, indoor occupations, etc.

3. Previous disease. Pleurisy is supposed to predispose to pulmonary tuberculosis, but in what proportion of cases tubercle of the pleura is primary and in what secondary, is in our present state of knowledge impossible to say.

Bronchial Catarrh—which is supposed to be a predisposing cause, may rather be a part of the tubercular predisposition.

Anatomy.—In order that we may recognize the disease early, it is important that we should know where it begins. This has been proven to be in the great majority of cases in the apex of the lung, not the extreme apex, but from an inch to an inch and a half below, rather nearer the posterior and external borders. Another usual site of the primary affection corresponds on the chest wall with the first and second interspaces below the outer third of the clavicle. Secondary infiltration of the lower lobe occurs early, and is situated from one inch to one inch and a half below its highest point. This situation corresponds on the chest wall to a point opposite the fifth dorsal spine, midway between the border of the scapula and the spinous processes of the vertebræ. Inasmuch as infiltration of the lower lobe occurs early at this site in pulmonary tuberculosis of the chronic and fibroid varieties, it is of the utmost importance to examine this part of the lung, as the recognition of a lesion here, especially if coincident with physical signs at the apex, is, in the opinion of Dr. J. Kingston Fowler, almost positive evidence of tubercular disease of the lungs.

Although all parts of the lungs are equally exposed to infection and all are alike equally concerned in defending from the invasion of the microbes or toxins, yet the upper parts of the lungs are first affected, in almost all cases. How is this?

According to recent researches, particularly those of Birch-Hirschfeld, who has made casts of the bronchial tubes in fusible metal, this part of the lung (upper lobe) suffers from certain mechanical disadvantages. He shows that the apical bronchi in the adult take a very steep direction upwards, so that to pass from the main bronchus to the apical bronchus, the air stream must be diverted, almost at a right angle, while the course of all other tubes is either straight or at a very large angle. He further points out that on coughing a backward air current may be forced into these vertical branches, whereby infectious foreign bodies may be wafted into relatively inactive areas. He has shown that even in health these upward tubes are liable to sink a little, and so to increase their naturally somewhat spiral curves, especially in weak, flat chests. Thus stagnating areas or even kinks and pouches may be formed, in which foreign bodies or ordinary secretions may gather and form excellent media for the reception of microbes and other dust.

How do the bacilli gain entrance to the lungs? Excluding the comparatively few cases in which they enter by direct extension from neighboring lymphatic glands, they may be said to enter in one of two ways: either through the blood-vessels or through the bronchial tubes. When they enter through the blood-vessels the source of infection is usually a caseous lymphatic gland, in which case they usually set up a disseminated miliary tuberculosis, exceptionally a circumscribed lesion of the lung. The infection is here set up by an embolic process, the bacilli being arrested in the alveolar capillaries, in the walls of which they provoke a specific cellular growth, from which the process soon extends into the cavity of the air-cells, where a similar cell-growth develops.

The mode of infection which interests us most, and is by far the most common, is that through the bronchial tubes. When this is the mode of entrance, the investigations of Birch-Hirschfeld have demonstrated that the bacillus settles upon the mucous membrane of a bronchus between the third and fifth magnitude, in the posterior apical bronchial area, that then, if circumstances are favorable, having implanted itself securely upon the part, it breeds and goes through the manufacture of secondary products, such as small cell infiltration and giant cells in the sub-epithelial layer; a thrombosis of the tube is established, beyond the block, atelectasis of the corresponding distal area then ensues, with secondary inflammatory and obliterative processes, and later with circumscribed pleurisy. On the proximal side of the block the tube dilates, fills with degenerate secretion and undergoes softening and ulceration, until it may rupture. Such a rupture of the softened wall may follow a muscular effort or strain, and by way of it

tubercle bacilli and septic tissue products may then first be swept into the sputum, or by aspiration into other pulmonary areas, or again, the mass may be detached and expectorated; in either case latent becomes manifest tuberculosis.

DIAGNOSIS OF EARLY TUBERCULOSIS.

Treatment that will secure the greatest number of recoveries requires to be applied early, hence the importance of early diagnosis. The symptoms requiring special investigation are the cough, sputum and temperature.

Cough is a pretty constant symptom, at first short and frequent, but sooner or later accompanied by expectoration.

Sputum.—In the early stage the sputum is scanty and mucoid, later it becomes muco-purulent and viscid. It should be examined early for the bacillus, and this examination should be frequently repeated, if we are unable to demonstrate its presence. We must remember that absence of the bacillus does not prove absence of phthisis, while, on the other hand, its presence is positive proof of the presence of the disease.

Temperature.—Methodical and frequent estimation of the temperature is very helpful. It should be taken at least every two hours, between 8 a.m. and 10 p.m. It is generally agreed that the pyrexia of tuberculosis attains its maximum, and may often be exclusively present, in the afternoon. A slight evening rise of temperature may be one of the earliest symptoms.

Physical Signs.—We must now remember the regions where physical signs are usually first to be found. In all cases where the symptoms suggest phthisis, the lungs are to be very carefully examined, particularly the apices. Corresponding points of the two sides are to be compared with the utmost precision. In percussing it is well to use light and single strokes. If atelectasis distal to a bronchial thrombus has taken place, there will be a slight alteration in pitch in the area deprived of air.

The earliest physical signs are usually obtained by auscultation, in practising which we should first ask the patient to breathe naturally, then deeply, and lastly to cough, and immediately follow it by deep inspiration. Apical lobular collapse being common, it follows that weakened respiratory murmur will also be common. This is frequently associated with increased vesicular murmur at the apex of the unaffected side. Another early sign is furnished by harshness of the breath sounds. The expiratory murmur is prolonged and raised in pitch. Moist sounds may be absent in incipient cases, but if a click is heard it is strong evidence of tuberculosis. In a case that was referred to me for examination a couple of years ago, the only physical sign that I could detect was a slight pleuritic friction over the posterior part of the left apex. Upon this

sign I based a diagnosis of phthisis, and under treatment the patient improved very greatly. She again came to me for examination a few days ago, and now there are very evident signs of disease in the upper lobe on the left side, and also in the upper part of the lower lobe. Upon inquiry, I found that during the past winter she had not carried out the directions formerly given to her, but instead had been taking various remedies vaunted as sure cures for consumption.

In cases where we are unable to satisfy ourselves as to the nature of the disease from the symptoms and physical signs, we may resort to the use of tuberculin. While the use of this remedy is not free from danger, it is said by those who have used it, that if the patient be kept in bed till the reaction completely subsides, it may be used with impunity.

Treatment—Preventive.—The two great sources of danger, we have seen, are milk and sputum. A tuberculous mother should not nurse her child, but should procure a wet nurse, or failing that, feed it artificially.

Milk, particularly when intended for children, should be boiled or preferably sterilized. Possibly the time may soon come when such action will be taken by the Government as will result in the elimination of the disease from cows, but till such is the case the milk should be boiled or sterilized.

The sputum of all tuberculous patients should be either destroyed or disinfected. Patients should be warned that if they do not carry out the directions for the destruction of the sputum, they will very likely be the means of conveying the disease to other members of their family, and others with whom they come in contact. Patients, when going about, must carry a receptacle for the expectoration, and faithfully use it. The contents of this must be destroyed at least twice daily by burning, and the vessel washed with boiling water and some disinfectant. Pocket handkerchiefs should not be employed, except in the form of soft paper, which can be at once burned. Tuberculous patients should not be sent into the wards of a general hospital, but should be cared for in special sanatoria. The Hon. Mr. Stratton deserves the thanks of every member of the medical profession, as well as of every inhabitant of Ontario, because of the bill he introduced at the last session of the Provincial Legislature, whereby he makes it possible for municipalities to provide institutions where such patients can be properly cared for, and at the same time reduce the danger to others to a minimum.

Houses occupied by tuberculous patients, or in which such have died, should be thoroughly disinfected and cleaned.

In predisposed persons, the importance of a good general hygiene cannot be over-estimated. The ground upon which

their dwellings stand should be thoroughly drained. They should have an abundance of fresh, pure air by night as well as by day. Open bedroom windows should be the rule. There should be no dark rooms in their houses. Excesses of all kinds must be avoided.

Curative Treatment.—In the cure of this disease two factors are involved, viz.: the destruction of the bacillus, and the increasing of the powers of resistance of the patient.

1. The destruction of the bacillus. Heretofore, treatment with this object in view has not been successful. The means by which it has been attempted are tuberculin and serum from immune animals. Tuberculin, when first introduced, was extensively used, and rapidly fell into disrepute because of the unfortunate results that followed its use. The serum treatment has been used chiefly in Italy. Physicians outside of Italy who have tried the serum originally prepared by Prof. Maragliano, of Genoa, have not found it as beneficial as Italian physicians have. The tuberculin and serum treatments as at present practised are unreliable and for the most part useless.

Our main reliance in the cure of the disease rests on the carrying out of the second factor, *i.e.*:

2. The increasing of the resisting powers of the patient. How is this to be done? By promotion of nutrition. The nutrition of the patient is to be promoted:

(a) By suitable food, given in such quantities as to secure assimilation and digestion. In cases unattended with symptoms of indigestion, it is well to allow patients to take food much as they would in health, not restricting them to any particular kind of diet, unless it be to increase nitrogenous and fatty foods, especially encouraging them to eat plentifully of butter, and drink unsparingly of cream, and at the same time diminish carbohydrates, which latter phthisical patients do not seem to digest well. A large percentage of phthisical patients present symptoms of indigestion, which makes the management of their cases difficult and very often unsatisfactory, inasmuch as they are unable to take food in quantity sufficient to promote their nutrition. In these cases some advocate "forced feeding," but how these patients, whose digestive systems are already deranged, can take, digest, and assimilate more food than if their digestive systems were healthy is difficult for me to understand. It seems to me more rational to restrict the diet, in such cases, to liquid food of an easily digestible nature, to such time as the gastric functions are restored, and then from time to time to add on such articles of diet as are found to agree with the patient. It is difficult to formulate a rule for feeding phthisical patients. The only satisfactory thing to do is to carefully study each case separately, and adapt the diet to the individual case. I would like to warn against what I believe

to be a pernicious habit; that is, giving patients who are able to take an ordinary meal, solid food between meals. There should be nothing given between, unless it be a glass of hot milk or beef-juice, either of which may be given with excellent results at bedtime.

Alcohol.—Under the head of diet we may consider the advisability of giving alcohol in some form. There are those who advocate its use, and who claim that it exerts a beneficial influence over the disease itself. For my own part, I have seen little, if any, benefit follow its use in these cases. On the other hand, I have known it to be decidedly injurious, by patients becoming addicted to its intemperate use. If used at all, it should be with the meals only, and in small quantity; for, if given between meals or in excessive quantity, it is sure to disturb digestion, and thus defeat the very object we have in view, viz., the nourishment of the patient.

(b) By seeing that the surroundings of the patient are such as to favor his nutrition. We should be careful to see that the dwelling of the patient is erected on ground where the drainage is as perfect as possible, as it has been shown that dampness is conducive to the growth of the bacillus. The house, in addition to being well drained, should be well ventilated and well lighted. One great difficulty I meet with in the treatment of phthisical cases is to get the patient to consent to an ample supply of fresh air in the sleeping-room. It is too much the habit in this country for people to shut out the fresh air during the cold weather by putting double windows on their dwellings. I insist on my phthisical patients discarding storm-windows, especially from their sleeping-rooms, and having a window open either in the bedroom or a room adjoining. Not only must the patient have a plentiful supply of fresh air in his sleeping-room, but he must during the day live in the open air. The length of time that the patient is to remain in the open air each day must be regulated according to the weather and the condition of the patient. It is wonderful how long phthisical patients can remain out in even very cold weather, when they are properly clad and wrapped. Dr. Burney Yeo, in his "Clinical Therapeutics," says: "It is to the possibility of being much in the open air, even in winter, which change of climate often affords, that it owes its great value." This opinion I have long held, and am glad to have it confirmed by such an authority as Dr. Yeo.

Change of Climate.—I believe if change of climate is to be at all useful it is in cases of early phthisis, occurring in persons capable of taking active exercise. The disease should be limited, non-progressive, and quiescent or but very slowly advancing, with little or no fever. I think it cruel to send patients away long distances from home when the disease is far advanced or

advancing rapidly. It is then that this class of patients should have rest and home comforts.

(c) *Exercise*.—In advanced cases most men are agreed that rest is indicated. In early cases, with nutrition well maintained, a considerable amount of physical vigor remaining, exercise is desirable as tending to promote appetite, digestion, and nutrition, and to help the expansion of the affected lung. Exercise usually involves life in the fresh air and the removal more or less from the vitiated atmosphere and the habits of invalidism of the sick-room.

(d) *Bathing*.—Patient should take a sponge bath every morning. It is well to have this carried out in a warm room in the following manner: He should stand in a tub which contains a few inches of warm water, or just enough to cover his feet, so that they may be kept warm till the patient is dressed. Beside him on a stand is a basin containing cold water, or water from which the chill has been taken. With a sponge lightly wrung out of this water the patient rapidly wets his entire body. Then dipping the sponge in the water, he squeezes it over the shoulders and chest, then rapidly dries himself with a coarse towel and then dresses, still keeping his feet immersed in the warm water. When dressed he dries his feet thoroughly. Bathing carried out in this way will be found refreshing and invigorating to most patients.

(e) *Clothing*.—Patient should wear underclothing the whole year, but of different weights for different seasons; thus he should wear a heavy weight for winter, a medium for spring and fall, and a light merino undersuit for summer. If proper precautions are taken with the underclothing, we need not bother much about the outside clothing, as common sense will, no doubt, dictate to patients proper changes, according to changes in the weather.

Certain medicines also improve the nutrition of the patient. The drug which holds the first place for this purpose is *cod-liver oil*. This is an easily digested fat, possessing high nutritive qualities, and at the same time it appears to have the power of aiding the assimilation of other foods, which would not be absorbed except in its presence (Whitta). It should be given in small doses (1 dr.) about one hour after meals. It is contraindicated when the patient's temperature is high, or when he suffers from catarrh of the stomach or intestines.

Hypophosphites are useful, especially in the early stages of the disease. They seem to influence the nutrition favorably, and doubtless any virtue they possess is due to this fact.

A number of medicines are used to assist in the restoration of the digestive functions, which are disturbed in almost all cases of phthisis. In fully 70 per cent. this disturbance, precedes the onset of the phthisis, and in the remaining cases it

shows itself during the course of the disease. So far as my experience goes, the treatment of the digestive disturbance is of paramount importance. It is in some of these cases of early phthisis that arsenic seems of special value, given in small doses before meals, or, if there is anemia, in large doses after meals. In atonic cases, characterized by epigastric discomfort after meals, flatulence, nausea, and constipation, strychnia may be given along with the arsenic. In the irritable variety of dyspepsia, as indicated by acidity and vomiting, probably no remedy is of as much value as subnitrate of bismuth in large doses before meals. In cases attended with indigestion of carbohydrates, malt preparations are of value.

Antiseptics, especially creosote and allied drugs, have been extensively used, and in many cases with satisfactory results. Creosote has been used both by inhalation and by the mouth. The method by inhalation for the purpose of destroying the life of the bacillus is now obsolete. If when used in this way it exercises any influence whatever, it is by relieving the bronchial secretion. Dr. Fyffe, of Victoria Park Hospital, London, has shown, by injecting the sputum of patients into guinea-pigs, before and after the inhalation of creosote, that it exercises no influence whatever on the virulence of the bacillus.

Creosote, when taken by the mouth, appears to exercise a very beneficial influence. Dr. Fyffe made experiments with the sputum of patients taking creosote by the mouth, and showed that the bacillus became less virulent under its influence: the larger the dose the less virulent the bacillus. He gave from 2 to 12 min. three times a day.

Dr. Douglas Powell says: "In cases of acute phthisis, when the acute phase has passed; in cases also of more advanced disease when the hectic period has either passed or has much lessened in activity,—preparations of creosote and its congeners, especially guaiacol, are of distinct value."

Dr. Semon, of St. Thomas' Hospital, says "that the constitutional treatment by large doses of creosote cannot claim in any way, so far as my experience is concerned, to be looked upon as a true specific against tuberculosis, but it can be positively stated from a large experience, both in hospital and even more in private practice, in which the patients more strictly attend to their health, that as a symptomatic treatment it excels, at present, every other form known. The patients gain in weight, their appetites improve, the night-sweats diminish, the expectoration becomes less purulent, and in a good many cases, especially if not coming under observation at too late a period, the disease actually appears to become arrested. It is absolutely necessary, first, that the creosote preparation should be perfectly pure, and, secondly, that the capsules or pills be taken immediately after meals."

Clinical Note.

SCREW NAILS IN FRACTURES.

BY A. GROVES, M.D., FERGUS.

Some months since—to be exact, on the third of June last—a young man riding a bicycle was struck just below the left eye, close to the nose, by the point of a buggy shaft, which penetrated straight through, coming out behind the ear. He was carried along by the shaft until the tissues gave way. Amongst other injuries, the left articular process of the lower jaw was entirely carried away, and the jaw broken also on the right side. To keep the fragments in apposition was a difficult problem, owing partly to the great injury to the soft parts. It struck me that a screw nail would solve the difficulty, and accordingly I put the idea into practice. Holding the bones in position, I had them drilled by the aid of a dental engine, and on putting in a screw nail, perfect immobility of the break was obtained. In the necessary manipulations, I was ably assisted by Drs. Armstrong and Morrow. Since the above case occurred, I saw, with Dr. Nairn, of Elora, a case when in addition to a fracture of the femur and a fracture at the ankle-joint, with extensive contusion of the leg, there was a compound fracture of the tibia about the middle. To keep the fragments in apposition by the means ordinarily employed appeared to be impossible. Again a screw nail was used with the best results. My experience so far in the use of screw nails in fractures has been most encouraging, and I can strongly recommend the method, not only in cases of recent injury but in cases of ununited fracture, where operative measures are required. •In my cases I had silver screw nails made by a local watchmaker, but ordinary wood screws would answer the purpose. It will be found much easier to put in the screws than to use silver wire; there is less disturbance of the soft parts, and the screws hold the fragments firmly, which wire never does.

Society Reports.

LONDON MEDICAL ASSOCIATION.

In place of the regular monthly meeting for November, a convention on the subject of "Tuberculosis" was held on the afternoon of November 13th, in the Y.M.C.A. building, to which all the medical practitioners of the county of Middlesex were invited; and in the evening a public meeting of the citizens was held in the City Hall, when the advisability of establishing a sanatorium for the city and county was discussed, and heartily approved of.

THE AFTERNOON MEETING.

The London Medical Association, through its secretary, Dr. English, had issued invitations to all the members of the profession throughout the county to join with the members of the association in a convention, having for its object the consideration of tuberculosis and the best means of checking its increase, and one of the commodious lecture rooms of the Y.M.C.A. building was taxed to its utmost capacity by the gathering of earnest medical men who assembled. The chair was occupied by Dr. Balfour, president of the association.

Among the local medical men present were: Drs. R. M. Bucke, Macarthur, Niven, Williams, Hodge, Wishart, Hutchinson, Meek, Neu, Kingsmill, Nelles, Jamieson, John D. Wilson, Cl. T. Campbell, J. B. Campbell, Seaborn, Ovens, Henry Arnott, D. H. Arnott, H. A. Stevenson, W. J. Stevenson, White, Moore, MacLaren, Jarvis, Jento, Tillman, Ferguson, Alexander, D. H. Piper, Macklin, Moorhouse and Thomson. Among the physicians present from the county were: Drs. Lindsay, Thompson, Henderson and McCabe, Strathroy; Dr. Walker, Glencoe; Dr. Graham, Lobo Village; Dr. Glass, Poplar Hill; Drs. Hossack and Orme, Lucan; Dr. Mathewson, St. Mary's; Dr. Mitchell, Delaware; Dr. Hyttenrauch, Appin; Drs. Hughes and Ford Thorndale; Dr. Lang, Granton; Dr. Hotson, Parkhill; Dr. Anderson, Ailsa Craig, and Dr. McEwen, Melbourne. There were also present about twenty-five of the students in attendance at the Western Medical College.

Dr. George Hodge read an interesting and exhaustive paper on "The Preventive and Curative Treatment of Pulmonary Tuberculosis." He emphasized especially the necessity for diagnosis, if success in treatment was to be assured. He said

the most frequent causes of the spread of the disease were the sputum of patients and the using of milk from tuberculous cows.

Dr. P. H. Bryce, Secretary of the Provincial Board of Health, and to whom is due a great deal of credit for the magnificent work that is being done by the Board, laid before the meeting the need of sanatoria as the best and only satisfactory treatment for tuberculosis. He presented facts and figures that made evident the success which has followed this method of treatment.

After the conclusion of Dr. Bryce's remarks, a discussion followed, which was participated in by many of the physicians present. All of them expressed their concurrence with the ideas expressed.

The following resolution was unanimously carried :

Moved by Dr. Cl. T. Campbell, seconded by Dr. Niven, "That in the opinion of this meeting of representative physicians of London and the county of Middlesex, it is of the greatest importance, in the interest of the public health, that a sanatorium for the treatment of consumption should be established in this county, as experience has demonstrated that this disease is contagious, that it is preventible, that patients can seldom have proper treatment at home, that their presence in private houses is a source of danger to the community, and that public sanatoria meet all the requirements of the case."

THE EVENING MEETING.

Mayor Rumball presided at the public meeting held in the City Hall in the evening, and with him on the platform were Dr. Bryce, Dr. Balfour, Dr. English, Rev. Dr. Saunders, Warden Murray, Sheriff Cameron and Mr. Thomas Coffee.

The mayor briefly outlined the purpose for which the meeting had been called, that of considering the establishment of a sanatorium, and said that the people of London were never appealed to in vain for anything having for its object the relief of suffering.

Dr. Balfour followed, opening his remarks by saying that the subject of combatting the spread of tuberculosis had already been considered from the scientific standpoint by the doctors' convention in the afternoon, and this meeting was for the purpose of increasing public interest in the movement. He drew a parallel between insanity and consumption, as both being cases in which the Government should step in and see that the sufferer from either should be prevented from being a danger to the community. A consumptive was dangerous not only to his family, but the whole community. Scarlet fever and smallpox

cases were immediately isolated, but with consumptives the danger was so remote it became very difficult to deal with the matter effectively. A person might have consumption for a year and a half without knowing it, and live for one, two, three years, or an indefinite period. In Middlesex county last year there were over one hundred deaths from consumption, over sixty of them being in this city. In the province the deaths from this cause last year were greater than from all other infectious diseases. It was established beyond all doubt that consumption was communicable. Seventy or eighty per cent. of the sufferers were from the artisan class, a fact that rendered sanatoria all the more essential, because they were generally not able to obtain proper home treatment. Drugs in the treatment of this disease are now given a secondary place, and the "outdoor treatment" is regarded as of first importance. Everyone is subjected every day to the infection of tuberculosis; it is largely a matter of individual resistance.

Dr. Bryce traced the recent history of several infectious and contagious diseases. He instanced diphtheria, and said that in thirteen years time the deaths had been reduced from 1,700 in 1887, to 350 in 1899. There were only 1,200 deaths in the province last year from all infectious diseases. But on the other hand, tuberculosis had not only not been reduced in its effects, but was actually on the increase. There was no subject to-day in the matter of health so important as the treatment of consumption. Not more than twenty-five per cent. of the cases of consumption were discovered even by medical men before being advanced to the incurable stage. At present one person in every nine in this province was dying of consumption. Dr. Bryce argued that, aside from its sentimental side altogether, the saving of 3,500 lives in this province was worthy of a great effort. There was a certainty of cure in some cases. Amelioration was quite possible in others. And in any event, sanatoriums would save the lives of the families of those afflicted.

"We simply call it a movement for sanatoria or homes in which there will be a prospect of recovery for the three or four hundred consumptives at present in the county of Middlesex." This, Dr. Bryce said. The Provincial Health Officer stated again that the purpose was to do something for the people of limited means, at a period when that effort would be effective. The doctor referred to the splendid system of sanatoria in Germany. He said the idea of a sanatorium was the same as every citizen tried to carry out in his own home—warm, light houses, an abundance of food and clothing, and regulation of life after common-sense methods. If private houses fulfilled these conditions in practice, there was no need to discuss the subject of sanatoria.

Dr. Bryce outlined the Government Bill. "At any moment that the council of any city or municipality, or combination of municipalities, desire to erect a sanatorium, they will submit at the annual elections a by-law, asking for a certain grant to be set apart by that municipality for this purpose. If that money is granted—and we will suppose for practical purposes that \$20,000 is required in the county of Middlesex for such an institution—I am quite certain no more, practically, would be necessary, because benevolent persons, seeing the good being done, would erect a cottage here and there, enough to keep up with the growth of any requirements that might be made, and besides we know this, if we had our sanatorium thoroughly at work, our cases would be diminished. It is like an epidemic of diphtheria, where we isolate cases, and there are no more cases. Suppose a by-law is submitted in this county for \$16,000, on the understanding that the Government will give \$4,000, or up to 25 per cent. of what is expended. If you wish to expend more, the Government is limited to \$4,000. One cannot conceive, with so plain a statement of facts, that there could be any question as to what will be done. The medical profession make money out of consumption. They don't cure many people. And if the medical men have in them that essence of the true physician, philanthropy, and are prepared to say, 'We have failed to lessen the mortality from consumption, and we ask you in the interests of the city and county to help us to take some practical step whereby we can do something for those who are dying every year in this county'—if the medical men say that, the public who are dying should not be slow to supply the necessary capital." The speaker stated that the Government would pay \$1.50 per week for every patient until cured or deceased, and required the municipality to pay another \$1.50, leaving only \$2.00 per week at the outside to be provided by friends, lodges or private means. Dr. Bryce concluded by saying it was wonderful the effect of fresh air. In Germany, the windows of sanatoria were nailed down from the top.

Dr. Cl. T. Campbell, seconded by ex-Warden Elson, moved the following: "That we here present form ourselves into a local association, to be affiliated with the central association in Toronto, for the purpose of assisting in the distribution of literature in regard to the contagiousness of consumption and the need to be taken in regard to isolation in its treatment. And that a nominating committee be appointed to select officers, to be chosen as far as possible from different portions of the county, the committee to consist of the following: The Mayor, the Warden, Charles Taylor, Chairman of the Board of Health; Messrs. P. Elson, C. C. Hodgins, J. P. Grigg, Sheriff

Cameron, T. Coffey, Ald. Winnett, Drs. Niven, Moorhouse, English and Balfour, with power to add." The resolution was adopted.

Sheriff Cameron moved, seconded by Mr. C. F. Complin, "That having heard the lengthy and convincing arguments in regard to this, the most dreaded and destructive disease of the present day, we heartily approve of the advisability of the erection of sanatoria for the isolation and more successful treatment of the many sufferers from consumption; and that we urge upon the City and County Councils that active steps be immediately taken for the establishment of a sanatorium for this city and county." This resolution was also adopted.

Mr. W. C. Coe said it would be undesirable to have this white plague centralized in this city.

Dr. Bryce replied that the sanatorium would be built in the country. But, he asked, could anything be worse than to have the disease, as now, at every other door?

Mr. Peter Elson—Would it be compulsory upon consumptives to go to the sanatorium?

Dr. Bryce—It has not been conceived that it will be a necessary thing to compel people to go. The great question will be to have enough sanatoria.

Dr. Balfour, in reply to a question, said consumptives were not encouraged to go to the General Hospital.

Vigorous speeches were made by Warden Murray, Rev. Dr. Saunders, Rev. Canon Dann, Mr. Thomas Coffey, County Councillors Elson, C. C. Hodgins and S. P. Grigg, Mr. Chas. Taylor, Mr. J. W. Little, Ald. Winnett and M. H. O. Hutchinson. The county councillors intimated that the county would make a favorable response in the matter.

Votes of thanks were tendered to Dr. Bryce and the Mayor. Dr. Balfour gave praise to Dr. English and Dr. Macarthur for their efforts in bringing this meeting to pass.

W. W. ENGLISH,

Sec'y. London Med. Assoc.

Progress of Medical Science.

SURGERY.

IN CHARGE OF EDMUND E. KING, HERBERT A. BRUCE AND L. M. SWEETNAM.

Surgery of the Lungs and Pleura.

Extracts from M. H. Verneuil's paper, read at the meeting of the Société Belge, held in Brussels.

In this excellent study, M. Verneuil divided his subject into two chapters. In the first he considered the question from the point of view of diagnosis. In the second, he reviewed the different affections of the pleura and the lung capable of surgical treatment. He noted the indications for operation and the choice of procedure to follow. The whole paper is worthy of careful perusal. I can give only a few sentences.

The most thorough auscultation and percussion may afford information quite accurate enough for the physician, but not mathematically exact enough to enable the surgeon to proceed in safety. We have nothing to supply this lack of information. There are some points with reference to the stethoscopic localization of pulmonary sounds which are important to note. Tuffier, in the report presented at the Congress of Moscow, declared that when one attacks a pulmonary focus, if one trusts to information furnished by these sounds, one aims generally too low. Pierre Delbet affirms that that is true only for the part of the lungs situated below the hilum. For that situated above, one generally aims too high. Delbet says that the stethoscopic sounds are propagated along the bronchial tree in the direction of the inspiratory current of air, so that they acquire their maximum beyond the point where the lesion is situated. If the cavity is in the lower segment of the lung, the stethoscopic sounds will have their greatest intensity below it; but if it is in the upper segment, they will attain their maximum above it—one will be led to think that the lesion is higher than it really is; one will aim not too low, but too high.

This formula is perhaps too narrow; but there is no doubt that if the surgeon happens sometimes to cut directly into the cavity whose location has been indicated by the stethoscopic signs, it is often otherwise. In a general way, superficial cavities can be recognized with sufficient accuracy; but for deep lesions, we must reckon with the propagation, towards the periphery, of the phenomena of auscultation.

Among the methods of diagnosis summoned to our aid, we

must already place in the first rank, radiography and radioscopy. In a great number of doubtful cases, when auscultation and percussion have given insufficient results as to the exact localization of a cavity, the Röntgen rays have given excellent information. Collections between the lobes, inaccessible to the ordinary methods of investigation, have been thus diagnosed. In these cases especially, and in those of encysted pleurisy, this new method of exploration has already had many successes.

It is well to remember that thoracic wounds, especially those of the lower left side, are often accompanied by a wound of the abdomen. The surgeon must never lose sight of this possible complication, which nearly always requires immediate intervention.

At the time of the accident, a search for projectiles entering the chest must never be attempted. Such accidents may cause serious hemorrhage or pneumo-thorax, which require early intervention. On the other hand, they may give rise only to mild symptoms, and operative manœuvres would be all the more unjustifiable, as the projectiles generally become encysted in the tissues and remain there without giving any trouble to the patient. At times, however, the tissues in which these foreign bodies are lodged, become infected.

We must treat empyema as we treat an abscess—all the more so as the walls of the cavity have no tendency to come together. Why should tapping give better results in pleural abscess than in ordinary abscess? A broad pleurotomy is the rational treatment of purulent pleurisy. Gallet expressed this opinion in that remarkable thesis which he put forth in 1889.

Two additional questions are to be answered. Must we drain after pleurotomy? and must we employ lavage of the pleural cavity? All admit that we must drain, but opinions differ as to the method of procedure. I think that the simplest drainage is the best: two india-rubber tubes of unequal length, joined together like a gun-barrel. As for the thousand-and-one complicated methods, whose description would fill a volume, it would be difficult to prove that they have ever contributed to the final success. The question of lavage is a more disputed one. Many surgeons still highly extol it. Ferrier's opinion is as follows: "What makes us doubtful as to lavage is that, on the one hand, it does not seem that it can ever play an anti-septic rôle, and that, on the other hand, it may favor infection in two ways: by introducing new elements of infection, if it be badly done, or by diffusing, throughout the whole pleura, those elements of infection already existing there. We therefore think that it is preferable to dispense with lavage, if possible, and that, when we must employ it, it will be advisable to use only sterilized or saline water."

The results given by injections of artificial serum intended to replace the purulent exudate, after tapping; injections into the pleural cavity when incompletely emptied (iodoform emulsion, tincture of iodine, permanganate of potash, etc.), seem to have fallen into complete discredit.

Pathologically, there exists an essential difference between an abscess resulting from a pneumonia, and a tuberculous cavity. But when the time comes that the physician considers his efforts as useless, in both cases the surgeon can still intervene; not in order to stem the malady by attacking its causes, but with the view of giving exit to the products contained in a septic cavity; of preventing the organism from suffering from the pernicious influence of these products; of favoring, in short, by different methods, the removal of the cavity and the cicatrization of its walls. The surgical procedure will never change, or change very slightly; the indications will be different. We shall speak, in succession, of abscesses of the lung, bronchial dilatation, pulmonary gangrene and tuberculous cavities.—Translated from "*Annales de la Société Belge de Chirurgie*," by HARLEY SMITH.

OPHTHALMOLOGY AND OTOTOLOGY.

IN CHARGE OF G. STERLING RYERSON, J. T. DUNCAN AND J. O. ORR.

Clinical Study of the Ocular Symptoms in So-called Posterior Spinal Sclerosis.

Oliver presented to the American Ophthalmological Society a "Clinical Study of the Ocular Symptoms in So-called Posterior Spinal Sclerosis" (abstracted by *Archives of Ophthalmology*).

The series comprised more than one hundred cases. Oliver divides these cases into two series. First, those in which the symptoms are expressive of the optic type of the disorder; second, those in which they point to the spinal type.

In the first, he found a number of evidences of early inflammation in and around the eyes, a type of disorder which seemed to exert the brunt of its force upon the ocular structures, and even, in many cases, thus seeming to act beneficially upon the general system.

In the second, the signs of previous inflammation of the ocular nerve elements, though not so gross, were just as certain; this type of the disease exhibiting the greatest alterations in the general condition of the subject.

Unrecognized Symptoms of Eye Strain.

Starr, in the *Journal of the American Medical Association* (abstracted by the *Medical Review of Reviews*), speaks of a number of symptoms of this condition not usually recognized.

One of the most frequent of those is pain in the back of the neck. It is frequently mistaken for what is commonly called "muscular rheumatism." It may radiate down the back or to the shoulder, but is usually limited to the neck. The symptom has to be inquired for, however, as the patient does not think of it in connection with eye trouble. It is almost pathognomonic of eye strain, and exists in about eighty per cent. of the cases. It generally entirely disappears with the correction of the visual error. Another symptom is mental confusion, or an inability to fix the attention upon a particular object of thought without great effort.

Closely allied to this condition, and possibly in part depending upon it, is mental backwardness in children. Comprehension seems obtuse and slow. Frequently this condition develops rather suddenly in a pupil who has previously been a good scholar, and is then often accompanied by headache and other nervous manifestations. The correction of the existing eye strain changes all this, and the child improves mentally and physically. Instances are common in school, where a child is backward simply because of the effort required to see distinctly.

Irritability is another common result of eye strain in adults, as well as in children. We are all liable to become irritable if overworked, and it is easy to see how an eye strain kept up hour after hour for days and months may lead to the same result.

Vertigo is a symptom frequently associated with vision, generally with a refractive fault. The vertigo may be transient and slight, or marked and persistent, so much so as to suggest grave intercranial disease. This may be one of a group of symptoms embraced by the term "nervousness." A very high proportion of those who come to the oculist with refractive errors admit themselves to be nervous.

Probably the most frequent of all the results of eye strain is seen in disturbances of the digestive system. In many instances has it been observed that a recurrence of the symptom follows a disuse of the glasses, or is the first evidence of the need for a change of glasses.

Voice Pictures—Their Production and their Photography.

J. Mount Bleyer, in the *Journal of Eye, Ear and Throat Diseases*, is most interesting. His instrument, the "Vibrograph," is very simple. The larger end of his tube is about

four inches in diameter, over this is tightly stretched a rubber diaphragm. The smaller end of the tube, into which he speaks or sings forms nearly a right angle with the other. Upon the diaphragm sand and emery powder are scattered. By sounding a definite note into the tube, as middle C, the sand and emery go into lines and form definite figures. Too loud a note will dance all the particles off, too soft a note will not move them. By singing certain notes and combination of notes, these figures can be changed into accurate reproductions of the forms of palms, trees and flowers. These can be photographed at will.

L. Webster Fox, M.D., of Philadelphia, sends a number of valuable reprints. Some of these are:

1. Implantation of a Glass Ball into the Orbital Cavity.

This must not be confounded with the Frost-Lang operation, in which the ball is inserted immediately after enucleation. The principle is the same, but Fox's operation is done where the eyeball has been previously removed, and where the tissues have so contracted that it is impossible to wear an artificial eye. The implantation of the glass ball makes an excellent stump, on which can be worn an artificial eye.

2. Epiphora, Lachrymal Abscess; Perigenital Absence of Lachrymal Punctae; Stricture of the Lachrymal Duct.

3. A Simple Operation for Divergent Strabismus.

This operation has been developed on the lines laid down by De Wecker, Grandelement, and Panas, but is simpler than either of them. The operation is divided into three parts and is performed under cocain. 1. Tenotomy of both external recti muscles and stretching of conjunctiva and Tenon's capsule. 2. Making the elleptic opening on one eye or both. 3. Suturing the opening. The paper was presented before the American Medical Association at its meeting in June, 1900, and marks a step in advance in the treatment of divergent squint.

J. T. D.

Editorials.

CANADIAN TRAINED NURSES.

We read in Toronto *Saturday Night*, a few weeks ago, an article on Canadian trained nurses, which caused us much surprise and deep regret. The general tenor of the article was to show that a large proportion of our trained nurses were better adapted for factory work than for any other occupation or profession. Beyond this there were certain unkind remarks as to the motives of those who desired to enter this profession and also on account of their conduct while engaged in their routine work. We understand that certain of our nurses feel somewhat indignant about the matter, but we do not think there is any occasion for worry on their part. The article was a poor weak thing in all respects, and evidently written by one who knew but little of what he was talking about. We can hardly think that the writer wished to seriously injure such a worthy and inoffensive body as the Canadian nurses, and we have a very decided opinion that if he ever has the misfortune to become very seriously ill, and is cared for by two nurses whom we can choose for him, that the manner of his editorial writing on the question of nursing will be forever thereafter materially different.

We fear that a large proportion of the public have only a very hazy idea of the status of the modern trained nurse. Let us consider, for a moment, what is being done in the largest and most important training school for nurses in Canada. We have at the head of that school the ablest superintendent of such training schools in the Dominion, if not the continent. Miss Snively, the lady in question, chooses very carefully from the hundreds of applicants which present themselves from year to year, and endeavors to select those who will be best fitted for the arduous duties which they are to undertake. Various matters have to be considered—education, general deportment, physical powers of endurance, tact, kindly disposition, and fondness for the work. To clear any doubt which may exist as to certain attributes, the candidates chosen are first put on

probation for a certain period, and finally those considered fit are selected. The nursing course lasts for a period of not less than three years, and the instruction received from the teaching staff is varied in nature and largely practical in character. We may say that it is as thorough and nearly perfect, and quite as exacting, as any such course can be.

What is the result? Not perfect, perhaps, but certainly as nearly so, we think, as we find in connection with any theological, medical or law schools. We have to acknowledge that there is something in the old familiar saying that a good nurse is born, not made. We also have to acknowledge that no matter what care is taken in the choice of material, certain disappointing results are likely to follow. Beyond this we have only to say in a general way, that the body of graduates from Miss Snively's training school are a honest, conscientious and skilful body of nurses, and at the same time have within their ranks a large proportion of the noblest sort of women that God creates.

LONDON AS A MEDICAL CENTRE.

The *Practitioner* of December again refers to the fact which has been so frequently discussed in recent years, that London, on account of the quantity and variety of its clinical material, should be the greatest medical centre in the world. It hopes that the development of the Polyclinic will soon bring about a "systematization and co-ordination" of the clinical teaching in that city which will largely help in the direction referred to.

The *Practitioner* thinks that there is already a great change for the better, and quotes from a paper published by Dr. Roose, of Washington, as follows: "Heretofore it has been the custom of American students to flock to the Continent and give London the go-by." But he says all this has changed lately with kaleidoscopic rapidity. The opportunities offered by the great metropolis for medical study and observation, either to the undergraduate or postgraduate, but more especially to the English-speaking student, are not excelled in the world. Dr. Roose is considered to have a good knowledge of the subject, because he has made frequent visits to the various European cities during the last twenty-five years.

Dr. Roose has also something to say about the mannerisms of doctors of various countries. "He contrasts the hat-play politeness of the French with the bluntness and sincerity of the Englishman. Of the Germans, he says that while they are immense workers and patient investigators, they can dive down deeper into a subject, stay longer, and bring up more mud than any other people. In German hospitals, after some bungling operation, he has been greeted with the remark—addressed to him in the belief that he was a Britisher—'Oh, you do this better in your country.' The Italian physicians of to-day, he pronounces to be among the best in Europe; in certain specialties, as medical jurisprudence, neuropathology, criminal anthropology and hygiene, they occupy the foremost rank. While admitting that continental life is in some respects very attractive, Dr. Roose holds that 'for genuine solidity, usefulness, and the civility of treatment that one experiences in London, commend an English-speaking rather than a French community.'"

We must confess that this, coming from a shrewd, clever and observant American, makes pleasant reading for us in Canada, who have long believed that in Great Britain are to be found the most solid, the most level-headed, the most practical, in short, the best surgeons, physicians and obstetricians in the world—outside of Canada.

THE ACTIONS AND USES OF DIGITALIS.

Since the days of Wuthering very much has been written and spoken on the uses of digitalis. It is now admitted that it is a drug that may do much good or evil, according to the skill with which it may be administered.

There is no small fear in the minds of some regarding its cumulative effects; but almost all drugs have a cumulative effect. Give more strychnine than can be eliminated and spasms will in time come on; or, if calomel be taken in slightly larger doses than the system can tolerate, in some days there may be salivation. In the same way arsenic may accumulate and give rise to neuritis, lead to paralysis, and iodine to iodism. The truth is, with ordinary care in prescribing of digitalis and watching

its effects on the digestive organs, the heart's action, and the arterial tension, there need be very little fear as to its cumulative effects.

Digitalis acts on both the heart and arteries, especially the arterioles. Further, it is a settled fact that it acts on the heart and arteries both through the nervous system and the muscle tissue of these organs. It acts on the cardio-inhibitory and vaso-motor centres in the medulla. In these facts we have the foundations for the study of its therapeutic uses.

In the first place, anasarca and dropsy, with low pulse tension, are benefited by the use of digitalis. The arterioles contract and the arteries are kept better filled while the veins are better emptied. In this way the fluids are taken up from the tissues and cavities of the body, the flow of urine is increased, and the heart's action gains in strength. It is a well-established fact that digitalis acts very much better in dropsy with low tension than with high tension. When dropsy and high pulse tension are found together it is necessary to reduce the tension before the digitalis will act. Here the beneficial action of a mercurial is specially noticeable as an adjuvant to the digitalis.

In fatty hearts much care is required in the use of digitalis. The heart's action is weak, though there may be no marked enlargement nor displacement. Such a condition prompts care. The heart may be markedly fatty, while the muscular tissue of the arteries shows no such change. In such a state of the vascular system, the digitalis would act on the vessels, and greatly increase the tension, adding largely to the work of the heart. Such an effect of the drug might prove disastrous. It is just in such a case, however, where the heart requires to be nourished. In combination with the digitalis some drug that will relax the arterial tension is called for. The iodides or the nitrites, along with the digitalis, will benefit such hearts.

Again, digitalis should be ordered with the utmost care in cases of aortic regurgitation. The increased arterial tension, caused by the drug, may give rise to a distinctly increased backward flow of the blood through the aortic orifice and induce serious syncope. When, however, the hypertrophy of these cases is failing and the heart dilating and becoming irregular, the proper exhibition of digitalis, along with arterial stimulants,

as the iodides and nitrites, will often add very much to the comfort of the patients.

There are few conditions where digitalis does so much good as in mitral inadequacy. Here the compensation of the heart is often bad; it is often irregular, and there is usually dropsy. Now all these indications pre-eminently call for digitalis. The systolic action of the heart is improved, its dilatation is lessened, and the mitral valves are brought closer to each other. The regurgitation is markedly reduced. The irregularity of the heart is also lessened. The arterioles gain in tone, the capillary circulation is brisker, the blood is forced along the veins, and the juices are gathered up out of the tissues. The change for the better is most marked.

There is another class of cases where the exhibition of digitalis holds out much hope of good results. All those cases usually spoken of as hemic or functional are really dilatation murmurs. These cases frequently follow some debilitating illness, as typhoid fever, prolonged anemia, or such like. In these cases the action of digitalis is very beneficial. The arteries gain in tension and the heart in force. In this way a richer stream of blood is sent through the coronaries. These vessels are better filled and kept filled under the improved arterial tone. The heart gains by this additional supply of blood. It gains in strength, its dilatation passes off, and what might have become a serious cardiac breakdown is cured by a judicious combination of diet, rest, and digitalis.

AUTO-INTOXICATION.

During the last ten years a good deal of excellent work has been done upon the subject of the poisons that may be generated within our own bodies, and that are now recognized as being capable of causing serious derangements of the health.

The bile is a secretion and an excretion. It is the former when it acts on the contents of the intestinal tract and aids digestion. It is the latter in so far as the bile contains constituents that would do much harm if they were not separated from the blood. So the thyroid gland, the thymus gland, the suprarenal capsules perform the double duty of separating some-

thing from the blood, and of adding something to the blood. Derangement of these organs may readily cause one or other or both of these functions to become perverted. Thus compounds that should be removed from the blood and changed may not be removed, and abnormal and injurious compounds may be formed and added to the blood stream.

In the instances of chronic diseases of the kidneys and in diabetes mellitus, very grave damage is done to the system by the existence in it of toxic products. The chemistry of these poisons has not yet been fully worked out, but much progress has been made along this line. In the intestinal tract very dangerous poisons may be generated.

Take the case of a healthy person who is making violent exertion. During this state of activity there is a rapid process of waste going on within the system. The skin is active and perspiration is free, consequently much of the waste is finding a ready escape. At this juncture, and while the system is still full of waste products, the skin is suddenly chilled. The elimination of the poisons ceases, and most disastrous results to the person may ensue. Sir W. R. Gowers has directed attention to a very severe form of myositis and neuritis that may owe its origin to such a cause.

Imperfect metabolism and elimination will give rise to such conditions as neuritis, neuralgia, rheumatism, melancholia, asthma, headache, eczema, myxedema, acromegaly, and many others. There are three great groups of poisons that act on the system. First, the toxins produced by living germs, as those of diphtheria, syphilis, leprosy. These toxins are capable of originating grave diseases, as witness the neuritis of leprosy and the tabes of syphilis. The second group are those poisons of external formation, and that are introduced into the system in a dead form, such as lead, arsenic, morphia, alcohol, and such like. A long train of serious troubles may arise from these. Then there is the third group, those produced in the body by some fault in its own organs, or by a lack of due balance in the processes of waste formation and waste elimination. The group of diseases that owe their origin to this class of poisons are both numerous and important, because often severe and obstinate, such as some cases of neurasthenia, some psychoses, and some cases of severe anemia.

A faulty or arrested action of the skin, kidneys, lungs or liver will soon load up the blood stream with waste products. So would a perverted action of many of the glands throughout the body. While much attention has been devoted to the diseases due to a *contagium vivum*, it is not well to neglect the large and important group of diseases that are due to the chemistry of our own bodies. Our bodies are chemical laboratories constantly making new compounds and splitting up old ones. These processes should receive the closest study at our hands. A thorough knowledge of this vital chemistry is of the utmost value to every practitioner.

This process of auto-intoxication may be very materially accelerated by the introduction into the system of some of the poisons of the first or second groups. For example, the auto-intoxication that occurs in a case of granular kidney is increased very decidedly by the improper indulgence in alcoholic beverages, or the inhalation of lead fumes. In like manner the injurious effects of gout would be made still more injurious by the presence in the system of the virus of syphilis.

THE CENTURY'S PROGRESS IN NEUROLOGY.

In few fields of research has the past century been more marked with progress than in that of neurology. A century ago there was a veritable chaos, having only theoretical conceptions as guides, without a foundation of facts or observations. The structure and action of the nerve-centres were as a dead language to the anatomist. Of the brain nothing was known but the gross anatomy. The cord was regarded as a prolongation of the brain, and as a large nerve. The origin of all the nerves was placed in the brain. The existence of fibres in the brain was unknown, nor was there any knowledge of nerve cells. Nerves were described as like blood-vessels, with cortical membrane, and medullary substances. The pathology of the nervous system was limited to the study of gross lesions, and such diseases as hydrocephalus, hemorrhage, atrophy, hypertrophy, induration, softening and encephalitis. These conditions occupied the entire discussion for the first half of the century. With regard to the cord, up to the last thirty

years, its diseases were spoken of as epilepsy, chorea, tetanus, rabies, traumatic lesions, inflammations and malformations.

During the early years of the century, when almost all the anatomists denied the presence of fibres in the nerve centres, Gall and Spurzheim affirmed their existence. Their opinion was that all the nerves took their origin from the grey matter. They held that the cord was a group of centres, rather than a large nerve, prolonged from the brain. They held the view that there was difference of structure as well as difference of function.

About a quarter of a century passed when the experiences of Bell and Magendie began to bring confirmation. In revealing to us the differences of function in the anterior and posterior roots, and the white bundles of which the cord is formed, the labors of these illustrious physiologists laid the foundation of our knowledge of the spinal cord. But the study was almost entirely on symptoms as anesthesia, hyperesthesia, paralysis, contractures and spasms, rather than on nervous diseases proper. The pathology underlying these had not been discovered.

Towards 1830, the vague views of Gall and Spurzheim on the origin of nerves and their fibres were cleared by a new light upon the subject, due to the discovery of the nerve cell by Ehrenberg, Valentin and Purkinje. Some ten years later, Hannover proclaimed that all the nerve fibres of the brain arose from nerve cells. In time, Virchow revealed to us the existence of an interstitial framework, a neuroglia, which Cruveilhier had already hinted at. Histologists now set to work on this rich field to work out the connection between nerve cells, nerve fibres and the neuroglia.

The labors of Stilling and Wallach mark an important date. About the commencement of the second half of the century, 1854, Wagner laid down the law that the brain and the cord were made up of an aggregation of cells and primitive fibres. These communicated with each other only by the intermediation of cells. All the phenomena of innervation was due to the union of isolated cells, or groups of cells with other cells, and with central and peripheral fibres.

A little later Deiters gave us the first precise information on the cellular elements of the central nervous system. Gerlach

opposed this cellular doctrine, and advanced that of a fibrillar network enclosing the cells in its minute interstices. The view of Gerlach held sway until the introduction of the neuron theory of Waldeyer. Indeed, there are some who still urge the views of Gerlach. During this same period Waller discovered the law of secondary degeneration, which led him to the important discovery that there were trophic centres for the motor and sensory nerves. This was followed by a knowledge of what constituted parenchymatous and interstitial lesions of the nerves and cord.

In 1853 Türck made the great discovery of a primary degeneration in the lateral tracts. This was the foundation for a scientific study and knowledge of spastic paralysis. A year later he followed up his work on the cord by a careful study of sclerosis of the posterior columns, and followed up work that had already been started by Horn, Wunderlich, Romberg and Todd.

In 1863 Friedreich discovered a hereditary form of posterior tract degeneration. At the same period, Rindfleisch, Leyden and Zenker brought to light that form of sclerosis known as insular. The researches of Charcot and Vulpian distinguished the paralysis due to this insular sclerosis from that known as Parkinson's, or paralysis agitans.

In 1853, Cruveilhier noticed that paralysis with atrophy resulted from disease of the anterior cornua. This was followed by Luy in 1860, who was more positive in his conclusions. A few years later, Clarke, Charcot, Joffroy and Hayem furnished the full proof of this form of atrophic paralysis by pointing out that the disease was due to a degeneration in the cells of the anterior cornua. By a process of reasoning, Heine and Duchenne were led to regard infantile atrophic paralysis as of a similar, though acute, origin. This work was followed up by Clarke, Vulpian, Joffroy, Charcot, Prevost. Bouchard and Charcot studied that double type called amyotrophic lateral sclerosis. The splendid work of Gowers for thirty years on the cord in classifying functions and diseases must receive high praise.

These twenty years of research were leading up to a further series of brilliant advances. Flourens, Broca and Hughlings Jackson were laying the foundation for cerebral localization.

Jackson had discovered the connection between unilateral epilepsy and lesion of the cortex on the opposite side. In 1870, Fritsch and Hitzig made the discovery that the grey matter of the brain cortex could be excited by the electric current. The work of David Ferrier on this great subject stands out as among the most brilliant, as well as the most accurate, of any scientific worker. Later, Wernicke has cleared up some doubtful points, and added new information. The patient labors on localization of Flechsig must be mentioned. He adopted the method of noting the time at which centres and tracts appeared, [by studying the nervous system of the fetus and the new-born.

Ten years ago Waldeyer gave to the world the neuron theory. Although this has not been accepted in its entirety, yet it is now the working theory of almost all neuropathologists. By this theory every cell with its fibre is a complete entity. It has no direct connection with any other nerve cell or fibre. The stimulus of one cell reaches another cell through the intervening nerve matter. This theory opens up a new view of the nervous system, and throws a great deal of light on what was formerly dark. The nervous system has now yielded up many of its most profound secrets to scientific research.

A great step forward was taken when it became known that certain poisons acted upon the nerves, causing loss of power and derangement of sensation. To Todd, Jackson, Duchenne, Leyden, Grainger, Stewart, Joffroy, Duménil, much of the credit is due for these valuable advances. About 1880, it became well recognized that there was a form of paralysis with loss of power and wasting of the muscles, together with pain, anesthesia, or numbness, and that these symptoms were not due to disease of the brain or cord. In 1887, Dana, of New York, in *Brain*, showed that the paralysis in the case of chronic arsenical poisoning was due to a neuritis. To Dr. J. Ferguson, of Toronto, is due, however, the credit of proving that paralysis following toxic conditions was a true parenchymatous degeneration, similar to Wallerian secondary degeneration. His paper, read before the Ontario Medical Association, in June, 1887, on "Arsenical Neuritis," marked an important stage in our knowledge of the pathology of the nervous system, as it was the first positive demonstration

of the degenerative changes in neuritis. This work he followed up by equally clear proof on the degenerations in lead and alcoholic neuritis. A.

TRINITY MEN WHO SERVED IN THE WAR.—The following is a list of the graduates and undergraduates of Trinity Medical College who served in the war in South Africa, together with their rank and corps: Lieutenant-Colonel G. Sterling Ryerson, M.D., A.M.S., Red Cross Commissioner; Major Fred. H. Brennan, M.D., A.M.S.; Captain Francis L. Vaux, R.A.M.C.; Lieutenant L. E. Wentworth Irving, M.D., R.C.A.; Civil Surgeon H. S. Roberts, M.D., A.M.S.; Civil Surgeon John Percival Lee, M.D., A.M.S.; Civil Surgeon Ed. S. Worthington, M.D., A.M.S.; Howard G. Barrie, Y.M.C.A. representative; Hospital Sergeant S. J. Farrell, M.D., R.C.D.; Hospital Corporal W. J. Macdonald, R.C.A.; Gunner W. T. Robertson, R.C.A.; Private A. H. Anderson, R.C.R.; Private W. M. Love, R.C.R. Can any College show a longer list?

The Provincial Secretary has granted leave of absence to Dr. C. K. Clarke, Medical Superintendent of Rockwood Asylum for Insane, Kingston, at the request of the Government of British Columbia, to enable him to investigate the working of the Provincial Asylum at New Westminster.

THOMAS M. FENWICK, M.D.

Dr. Fenwick, of Kingston, died at his residence, January 3rd, aged fifty-seven. We learn from the daily papers that about three months ago septicemia resulted from a slight wound produced while paring a corn. A few days before his death amputation of the leg was considered, but thought inadvisable. The deceased was born in Kingston, and graduated M.D. Queen's University in 1864. After graduating he settled in his native town and practised there up to the time of his last illness. He was for many years a member of the teaching staff of Queen's Medical College, and was also Dean of the defunct Women's Medical College of Kingston.

ABSTRACT OF THE PROPOSED BILL FOR THE TREATMENT OF DRUNKARDS.

The main provisions of this Bill are the following:

In all cities of Ontario having a population of 20,000 or over, the Police Commissioners empowered to appoint a probation officer to take the supervision of drunkards placed on probation by the court on suspended sentence. These officers are not to be members of the police force, and they are to act more in the capacity of friendly visitors than as informers. They will also assist the probationer in finding employment when necessary. It will be their duty also to investigate, for the information of the court, the previous record of persons arrested for drunkenness, and to keep record of all such investigations and also of all cases placed on probation. In cases where a fine has been imposed by the court, this fine may be paid in instalments to the probation officer while the person is on probation.

A medical superintendent shall be appointed by the Government to inaugurate and superintend the medical treatment of inebriates and dipsomaniacs, and to assist in establishing for their treatment hospitals and special wards in general hospitals throughout the Province. He shall also make local arrangements for home treatment in suitable cases. The superintendent and probation officers shall co-operate in the work of reformation.

Government grants to promote the medical treatment of dipsomaniacs may be made as follows: Hospitals specially established for the reception and treatment of drunkards, or wards in general hospitals specially equipped for this purpose, shall receive as a bonus 25 per cent. of the cost of building or special equipment, as the case may be; secondly, a special grant of ten cents a day over and above the usual per capita grant to all hospital patients, shall be allowed for cases of chronic dipsomania; and, thirdly, an extra grant of forty cents a day shall be allowed for a period of seven days for cases of acute alcoholism—the medical treatment not to be considered as a charity but as a loan, to be repaid subsequent to treatment and while the person is still on probation.

Able-bodied chronic drunkards, instead of being fined or sent to jail, shall be sent to the Central Prison for not less than six months, and all subsequent sentences shall be cumulative. Able-bodied chronic female drunkards shall be sent to the Mercer Reformatory on cumulative sentences. Chronic drunkards, male or female, not able-bodied, may be provided for in county or city houses of refuge.

Three physicians of standing in the Province may be appointed by the Government as a Committee of Consultation, to co-operate without salary, with the superintendent in inaugurating and carrying out the purposes of the Bill.

Obituary.

RICHARD THORBURN, M.D.

We have to announce, with deep regret, the death of Dr. Richard Thorburn, of Colborne, which occurred on December 15th. Deceased was the youngest son of the late David Thorburn, for some years M.P. for Lincoln in the old Provincial Parliament, and was born in Queenston in 1840. He graduated M.D. in the University of Toronto in 1865. After spending some time in England, he commenced practice in Queenston. In 1876 he removed to Colborne, where he continued in practice up to the time of his last illness.

Early in December he had some obscure cerebral symptoms, which were followed by left hemiplegia. As his condition was considered very serious, he was brought to Toronto for treatment. He sank rapidly, however, and died in ten days after his paralytic attack.

Deceased, who was unmarried, was a brother of Dr. James Thorburn, of Toronto. As a practising physician he was highly successful, and much respected by his patients and friends. He was always an ardent student and a constant reader of both medical and general literature, and always kept himself thoroughly abreast of the times in all matters pertaining to his profession.

The writer had the good fortune to know the deceased intimately, and he has no hesitation in saying that Dr. Dick Thorburn was one of the best physicians, and one of the most estimable men, that this country has produced.

DAVID A. NELLES, M.B.

Dr. David A. Nelles, of Thornhill, died at Grace Hospital, Toronto, after an illness of about five weeks. It is supposed that his death was indirectly due to an accident which occurred about two years ago, when he was injured by a fall.

He was born at Waterford forty-five years ago, educated at the Toronto School of Medicine, and graduated M.B. University of Toronto, 1879. He was very highly respected in Thornhill and a large portion of the County of York, on account of his skill as a physician, and also on account of his many charitable acts. His widow, a daughter of Mr. Berkeley Smith, Bursar of the University of Toronto, and two children, a son and daughter, survive.

EDWARD FARREL.

Dr. Edward Farrel, of Halifax, was one of the ablest and one of the most popular physicians of Canada. The announcement of his death, which occurred on New Year's morning, caused a great shock to many of his friends, especially in distant parts of Canada, who had not heard of his illness. According to the *Toronto Globe*, he had pneumonia and typhoid fever and was ill for many weeks.

He was born in Dartmouth, Nova Scotia, and was in his fifty-eighth year. He received his medical education in New York, where he graduated M.D. from the College of Physicians and Surgeons in 1864. After spending two years as a member of the house staff of Bellevue Hospital, he commenced practice in Halifax in 1866. He soon became one of the leading, if not the most prominent, physician of that city, and retained this proud position until the time of his death. He was a warm Liberal in politics, and was for a short time a member of the local Parliament, and was from 1877 to 1878 a member of the Government. Beyond this, however, he spent but little time in politics and devoted his energies to the practice of his profession. In private life he was one of the most genial and lovable men that we have ever met.

HOFRATH PROFESSOR ALBERT.

Another Viennese light has vanished in the death of Hofrath Prof. Albert, who was born in 1841, in Bohemia, in very poor circumstances. He showed an eager desire to enter medicine from a youth. After completing his gymnasium studies, he came to Vienna and entered for medicine under Skoda, Rokitansky, etc. In 1867 he took his degree of Doctor in Medicine. In 1872 he was promoted to Docent in Surgery. On the death of Dumreicher, in 1881, Albert was raised to the professoriate Chair of Surgery in his stead as collaborator with Billroth. He has written many monographs on most subjects in the science of medicine, and sanitation is not the least of these, having spent the last twenty years of his life in sanitary investigation, being one of the Imperial Board of Councillors.

In his 59th year, he has passed away beloved by all, and respected by thousands. Hundreds of wreaths have come in from foreign societies testifying their appreciation of his worth and expressing sympathy and sorrow in his death. The funeral was representatively attended by every section, rank and creed of the Empire.—*Medical Press and Circular*.

Personals.

Dr. J. V. Hutchison, of Montreal, spent New Years with Dr. Bruce L. Riordan.

Dr. William Britton, of Toronto, spent New Year's at his old home in Brantford.

Dr. R. A. McArthur, of Chicago, spent Christmas with his relatives in Toronto.

Dr. R. C. Boyle, of Vancouver, paid a brief visit to this city during the holiday season.

Dr. Armstrong (Tor. '80), of Northport, Washington Territory, is visiting friends in Toronto.

Dr. A. A. Shepard (Tor. '98), of Sault Ste. Marie, spent his Christmas holidays in Toronto.

Dr. Nattress, of Toronto, spent a week at the Welland, St. Catharines, early in December.

Dr. J. Ephraim Elliot has been elected President of the Toronto Young Men's Liberal Association.

Dr. H. Van Norman (Tor. '79), of Goldfields, Colorado, spent his holiday of two weeks in this city.

Dr. George McLaren (Trin. '99), one of the house staff Toronto General Hospital, is ill with pneumonia.

Dr. W. M. Pugh (Tor. '90), of Kenosha, Wis., was in town last week, visiting his many friends here.

Dr. W. H. B. Aikins, of Toronto, visited New York December 11th, and returned to his home December 21st.

Dr. J. H. Collins (Tor. '89), Chicago, spent Christmas in Toronto, and returned to his home December 26th.

Drs. W. P. Caven and H. J. Hamilton have formed a partnership in practice, which came into force January 1st.

Dr. W. J. Van Senkler (Tor. '91), Vancouver, British Columbia, was married on December 19th, to Miss Leila Mackay, of Toronto.

Drs. Gerald O'Reilly, of Guelph, and E. B. O'Reilly, of Hamilton, spent Christmas with their brother, Dr. Charles O'Reilly, of Toronto.

Dr. W. H. K. Anderson (Tor. '97), resident physician, Toronto General Hospital '97-'98, has been appointed Bacteriologist at the Williams Head Quarantine Station, British Columbia, in succession to Dr. Higgins. He will have special charge of the laboratory work under Dr. Watt, the medical officer of quarantine.

Dr. E. H. Lapp (Trin. '96), of Williamson, N.Y., paid a brief visit to this city during the holiday season.

Dr. C. A. Page (Trin. '99), resident physician, Toronto General Hospital, '99-00, was married to Miss Laura Tudhope, Toronto, December 12th.

Dr. W. F. Maybury (Tor. '97), house surgeon, Toronto General Hospital, '97-'98, Ottawa, came to Toronto, December 21st, and spent the Christmas holidays with relatives here.

Dr. Parfitt, formerly of Toronto, who has been for some time at Saranac, had an attack of influenza about the middle of December, but when last heard from his condition was much improved.

Dr. Theo. Coleman (Tor. '93), who has been practising in Toronto for the last two years, will in the future reside in North Ontario, where he has received a permanent medical appointment.

Prof. Ramsay Wright and Dr. Primrose, of Toronto, started for Baltimore, December 26th, to attend the joint meeting of the American Science Associations. While in Baltimore Prof. Wright was the guest of Prof. Wm. Osler.

Dr. Marshal Dean (Tor. '99), resident physician Toronto General Hospital '99-'00, Fort William, is now recovering from a somewhat severe attack of septicemia. He spent his Christmas holidays at his former home, Brighton, and passed through Toronto on his return to Fort William early in January.

Dr. Higgins, on his way east from British Columbia, visited the bacteriological stations at Minneapolis and Detroit, and then returned to the government experimental station at Outremont, Montreal, where he is now engaged under the supervision of Prof. McEachren in making experiments in regard to tuberculosis in cattle.

The many friends of Dr. Harry B. Anderson, Prof. of Pathology, Trinity Medical College, will be glad to learn that he has almost, if not entirely, recovered from his severe attack of sciatica after an illness of about two weeks in Toronto. He spent three weeks at the Welland, St. Catharines, and returned to Toronto, December 22nd.

We regret to state that Dr. Price-Brown, of Toronto, has not been in the best of health for some weeks. He left Toronto, December 22nd, for Ashville, South Carolina, where he expects to spend the rest of the winter. We sincerely hope, and have every reason to believe that he will return to Toronto in the spring with his health and vigor fully restored.

Correspondence.

ON CIRCUMCISION.

To the Editor of the CANADIAN PRACTITIONER AND REVIEW :

DEAR SIR,—It is one of the most curious things in human history, and it is of course an historical fact, that this singular mutilation should have been ordered and prescribed by Divine authority, for the "Chosen People." Nevertheless, there is a reason, indeed many reasons, for this singular custom. There is, to use a time-honored expression, "much method in this seeming madness."

The most obvious advantage of the removal of the foreskin, is that it promotes local cleanliness. This is of real importance in childhood. In adults the habit of withdrawing the skin and washing the glans has usually been learned, but with children and young boys it is not, as a rule, even thought of. It would indeed be injurious to the morals of a child, if the practice were taught and insisted on. The accumulation of smyrna, however, and its decomposition, is a source of annoyance and of irritation to many boys. Any irritation of the glans penis is liable to produce reflex excitement, precisely of the character which it is most desirable to avoid in young boys. It is very undesirable, and cannot but be prejudicial, to have this part of his person kept in a state of irritation. Anything which draws attention to it is injurious to any young lad.

In middle life, seborrhea, balanitis and herpes are common, and are often very troublesome. The majority of both middle-aged and elderly people would be better off and safer if they had been circumcised in infancy.

The real argument in favor of the general practice of circumcision is that it would greatly tend to reduce the prevalence of syphilis. It would be difficult to contrive an appendage more likely to facilitate the implantation of the syphilitic virus than the pressure. Folds of delicate mucous membrane are (by its means) kept constantly in the most suitable condition for the retention and absorption of any infective virus. The objections to any system of legal inspection and examination are notorious; but these very reasonable and right objections are not at all applicable to circumcision. Effected in early infancy, it might easily be made the means of preventing the prevalence of a loathsome and misery-producing disease. The gain would be without any drawback.

It ought not to be forgotten that in the case of a contagious disease of this kind, every case may become the focus for further spreading, and that the prevention of one case may mean the prevention of many.

These are, no doubt, in a sense "home truths." They are at the same time both interesting and important.

R. D.

MONTREAL, January 1st, 1901.

Book Reviews.

A Text Book of Histology, including Microscopic Technic. By Drs. A. A. BÖHN and DAVIDOFF, of Munich. Edited by G. Carl Huber, M.D., of Michigan University, translated by H. H. Cushing, M.D., of Jefferson Medical College. With thirty-five illustrations. Philadelphia: W. B. Saunders & Company. Toronto: J. A. Carveth & Co. Price, \$3.50 net.

This is an octave volume of 500 pp., gotten up in Messrs. Saunders' excellent style. Paper, binding, type and illustrations leave nothing to be desired. Turning to the matter of the book, there is much to give pleasure to the reader. To those working on histology it will prove a valuable help. The descriptions for the practical work of preparing specimens and making slides are specially full. There is much in the book also to interest the general practitioner. The lucid account of the structure of the several organs throws much light on the process of disease and the making of diagnoses.

Cancer of the Stomach, a Clinical Study. By Drs. OSLER and McCRAE, of the Johns Hopkins Hospital, Baltimore. With illustrations. Philadelphia: P. Blakiston's Son & Co. 1900.

Any monograph from the pen of Dr. Osler will command attention. He has given to the profession a number of other valuable monographs. The present work is valuable in so far as it brings our knowledge up to date in a readable form and of reasonable bulk. The diagnostic and pathological study is very good. There is nothing of special note in the treatment. Such could not be expected. The advice on diet, drugs and surgical interference is all that could be desired. We very highly recommend the book; for, though it may not enable the reader to cure his cases, it will bring to him an ease of mind, from a full knowledge of the disease, that is always a comfort to a physician.

Atlas and Epitome of Diseases Caused by Accidents. By Dr. ED. GOLIEWSKI, of Berlin. Authorized translation from the German, with editorial notes and additions by Pearce Bailey, M.D., Consulting Neurologist to St. Luke's Hospital, Yonkers; Assistant in Neurology, Columbia University; author of "Accident and Injury: Their relation to Diseases of the Nervous System." 40 colored plates and illustrations in black. Price, \$4.00. Philadelphia: W. B. Saunders & Co.; Canadian Agents: J. A. Carveth & Co., Toronto, Ont.

One would almost be surprised at the amount of good material that has escaped the attention of medical writers, when we pick up a book like the above and see the large number of omissions from standard works. The sequels to accidents and injuries

are so infrequently referred to, one would almost infer that they did not exist. But we know differently, and those of us who have had experience with large numbers of emergency accidents know that it is the serious results that bother us most. In the work before us the author has succeeded admirably in treating his subjects, with an amount of brevity that is astonishing for the amount of information that is contained in the description. The range of the work is over the whole body, and is contained in 550 pages, with hundreds of illustrations. The illustrations of this atlas, as in all of the series, are remarkable for their resemblance to the condition under discussion. Most colored illustrations in medical works, as a rule, convey an idea that is as far as possible from the fact. However, in this particular work, one can get almost as much information from studying the illustration as he could from examining the subject. In illustrating injuries to the joints and bones, very beautiful X-ray reproductions are used, and the importance of the X-ray in diagnosis is clearly made out. We think this is one of the few volumes appearing in the year, that should be in the hands of every practitioner who deals with emergency cases. It is, in our opinion, a book that will be of great use to surgeons who are called upon to advise in settlement of suits for damages arising from accidental injury. It will aid him largely in eliminating the personal equation. The volume is uniform with the series of atlases, and the illustrations, type work, paper, etc., are all that could possibly be wished for.

The American Illustrated Dictionary. A new and complete Dictionary of the terms used in medicine, surgery, dentistry, pharmacy, chemistry and the kindred branches, with their pronunciation, derivation and definition. By W. A. NEWMAN DORLAND, A.M., M.D. Philadelphia and London: W. B. Saunders & Co., 1900; Canadian Agents: J. A. Carveth & Co., Toronto, Ont. Price, \$4.50 plain; \$5.00 index.

This is a volume of convenient size. An up-to-date dictionary sufficiently full for the varied requirements of all classes of medical men. It is not claimed to be an encyclopedia, but a concise and convenient word book, aimed to furnish full definitions of the terms of medicine and kindred branches, and such collateral information as medical men generally would be likely to look for. Besides the ordinary dictionary matter, it includes a large amount of information arranged in tabular form. The important features of pronunciation and derivation have received full consideration. The volume is of attractive appearance and convenient size with clear typography. The numerous illustrations and 24 exceptionally good colored plates render this work one of pronounced value.

Modern Medicine. By Drs. SALINGER AND KALTEYER, of Philadelphia. Philadelphia and London : W. B. Saunders & Co., 1900 ; Agents for Canada : Carveth & Co., Toronto.

This work is by two physicians of Philadelphia, teachers and active members of hospital staffs. They have evidently had abundant material to work upon, and have done good work. The book cannot be called a reference hand-book, many of the subjects being too shortly discussed to be of real value. The book is very well gotten up, print of plates being really very fine. The sections dealing with sputum, urine, blood and bacilli generally being profusely and beautifully illustrated. Treatment, we think, is somewhat scant, as seems to be the fashion with the latest works on medicine, few hints being thrown out to the reader for dealing with possible complications. The price is moderate, \$4.00, cloth bound. It is worth the money, if only for the sections noted above.

A. B.

Modern Surgery—General and Operative. By JOHN CHALMERS DaCOSTA, M.D., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia ; Surgeon to the Philadelphia Hospital, and to St. Joseph's Hospital, Philadelphia. With 493 Illustrations. Third edition, revised and enlarged. Philadelphia and London : W. B. Saunders & Co. ; Canadian Agents, J. A. Carveth & Co., Toronto, Ont.

We have before us the third revised edition of DaCosta's "Modern Surgery." This book has passed through three editions in the last six years, and each edition has been a considerable improvement on its predecessor. We can confidently recommend the work to the profession ; it is up-to-date in most of the different branches of surgery. A very interesting and instructive chapter on Anesthesia and Anesthetics will well repay the reader for a careful perusal. The chapter on X-Rays is, in our opinion, not quite so complete as it should be at this day, at the same time the general remarks are good, and the illustrations capital. The whole work is illustrated by very elaborate drawings, and, differing from a great many other works, they have the advantage of not being colored. We think, however, an improvement could be made in one particular branch of the work, and that is the Treatment of Fractures. The subject of fractures has undergone considerable change during the past four or five years, and we do not note in this edition the same advance that there is in other branches. The subject of fractures and dislocations is so apt to be treated in a routine method, that advances in this particular branch of surgery are not usually carefully enough gone into in each succeeding edition. We are sorry for that, because the present-day treatment is really an improvement of that of a few years

ago, and we had hoped to see in this work more advanced ideas. One particular fracture that strikes us in the matter is the Fracture of the Patella. The only operative interference that has figured in these cases is that of sub-cutaneous wiring. In our opinion, if an operation is decided upon, the safest operation is the open method, and we believe that a greater proportion of cases of fracture are more advantageously treated by the open method than any other. Sub-cutaneous operations in any part of the body are far more dangerous than open methods to-day, where aseptic conditions should be the *sine qua non* of success. The typography, binding and paper of this work are all that could be desired for a first-class volume.

Manual of the Diseases of the Eye. By CHARLES H. MAY, M.D., Chief of Clinic in Ophthalmology, etc., Columbia University, New York. New York: Wm. Wood & Co.

It is a matter of some difficulty to write a book upon a special subject, and make it suitable for the student and general practitioner. This is what the author of the book before us has endeavored to do, and, we must say, with a good measure of success. He has, in this small volume, covered almost the whole ground touched upon in larger works. The author has adopted the plan used so admirably by Fuchs—that of giving the anatomy and physiology of each part before speaking of the diseases or injuries of that part. This is especially useful for the medical man who is not daily treating the eye, enabling him to find what he wishes to look up very readily. In its general plan the work resembles the standard books. Commencing with directions for the proper examination of the eye, it proceeds to describe the diseases of the different parts, beginning with the eyelids, and terminating with the retina and optic nerve. The treatment, both operative and non-operative, for the various diseases and injuries is given with clearness. Taking up optics, general principles are given, and those principles are applied in speaking of the correction of errors of refraction. The last chapter is a good—but concise—*résumé* of ocular therapeutics. The book is freely illustrated, twelve of the figures being colored, to show both the normal condition of the fundus and some of its abnormal states. The colored illustrations will be exceedingly helpful to any one who can use the ophthalmoscope. This book was not written for the man who purposes taking up ophthalmology as a specialty, but to those classes for whom it was written it may be commended as an exceedingly useful volume.

Selections.

The Treatment of Whooping-cough with Antitussin.

Heim (*Berliner Klinische Wochenschrift*) regards antitussin as the most valuable therapeutic agent thus far brought forward for the treatment of whooping-cough. It is an ointment composed of five parts of difluordiphenyle, ten parts of vaseline, and eighty-five parts of chemically pure lanolin. Heim used this remedy in sixteen, for the most part very severe, cases of pertussis, and always with gratifying results. In nine cases of unusual severity, the children were in a convulsive state when the treatment was initiated. These were infants from three to eighteen months of age. In all cases after rubbing the throat, chest, and back, there occurred a prompt and often an astonishing improvement in the patient's condition. The remedy diminished the spasms and increased the secretions, and after two days of treatment there was decided decrease in the coughing attacks. Complete recovery took place sometimes in a few days, and at the longest within two weeks. He observed no ill effects from its use. He further recommends the use of antitussin in acute catarrhal affections of the larynx and pharynx.—*Medical Age*.

The Physical Effects of Overdoses of Cocaine.

The commonest symptom following a moderate overdose of cocaine is a feeling of cardiac anxiety or depression, but with much larger doses, say from one to twelve grains, there is marked cerebral excitement, with loss of memory for current events and precipitancy of idealization, the thoughts passing through the mind "helter skelter." In some cases these large doses give rise to maniacal delirium under the empire whereof the patient may commit acts of violence of which he has no recollection on recovery. The special senses are not affected, but owing to the disturbance of the cerebral function the impressions conveyed from them to the brain may cause hallucinations. The heart beat becomes rapid and small, and the rhythm is more or less impaired. Associated with these symptoms there is muscular tremor and extreme restlessness. The effects of cocaine at any rate when administered hypodermically, seem to depend not only upon the actual amount injected, but also in no small degree upon the strength of the solution employed, as shown by the fact that an animal which supports an injection of half a grain without inconvenience, when administered in dilute solution, suffers severely if even a third of a grain be injected in concentrated solution.—*Medical Press and Circular*.

Sugar as an Oxytocic.

Madlener (*Munch. Med. Woch.*), referring to Payer's paper upon "The Influence of Sugar upon Metabolism in Pregnancy and During Labor," in which Payer records decided oxytocic effects at different stages of parturition, confirms the efficiency of sugar in cases requiring increased muscular effort, and relates his own experiments while mountain-climbing. Madlener ascribes this particular influence of sugar to its rapid absorption into the blood. No food is taken up so readily; none imparts to the system such prompt and effective stimulation as sugar.

Madlener had occasion to experiment in six cases of uterine atony, to wit, three times in primary and three times in secondary cases of deficient uterine contractility. In five cases out of six the oxytocic influence was noticeable within from one-half to one hour after exhibition. Five cases terminated by spontaneous birth. He used thirty grammes—one ounce—of sugar in a half-pint of water, and if necessary repeated the dose once. Two patients took more than prescribed (three and five ounces respectively) without untoward effects, nausea, or vomiting. In three cases out of the six Madlener noticed a decrease in the pains coupled with increased uterine contractility, as previously set forth by Payer. He strongly urges the practitioner to take advantage of this safe, inexpensive, and effective means of furthering labor.—*Medical Age*.

The Rationale of the Treatment of Anemia by Iron and Arsenic.

Dr. F. Apert has published a valuable paper devoted to the above subject in the *Centralblatt für Innere Medicin*. From careful observations carried out for several years in the clinic of Professor Riva, it had been found that the use of injections of iron and of arsenic had different results in the primary anemias. Thus it was found that while iron increased the amount of hemoglobin in the red corpuscles, arsenic increased only the number of red corpuscles. The experimental work referred to in the paper was undertaken to determine the conditions of the blood (both as regards corpuscles and hemoglobin) after a small amount of blood had been abstracted, and also when iron was given with the food; and also to ascertain the influence of arsenic and iron upon the regeneration of the blood in animals from whom blood had been repeatedly withdrawn and whose food and nourishment were free from iron. From these experiments it appeared that two things were necessary for a complete regeneration of the blood—viz., a restitution of the protoplasm of the red corpuscles and a sufficiency of iron for the production of hemoglobin. When no iron was given in

the food, the iron necessary for the formation of hemoglobin had to be obtained from the liver and from other organs of the body where hemoglobin and iron were deposited. If iron was withheld from the food too long the blood, and finally the body tissues, lost their hemoglobin and the animal died apparently from profound anemia. Dr. Aperti found from careful chemical analysis that when the period of profound anemia and of grave exhaustion had been reached the iron in the liver was greatly reduced, so that the amount in this organ fell as that contained in the spleen and muscles, while the amounts in all three organs were considerably below those in the organs of healthy animals. In animals rendered slightly anemic by bleeding or by withdrawing all iron from the food the administration of arsenic caused a very considerable increase in the number of red corpuscles, but none in the amount of hemoglobin. Injections of iron now caused a very striking increase in the hemoglobin, the amount almost doubling itself in seven days, rising in this time from fifty to ninety-five per cent. Repeated experiments gave the results and confirmed the belief that the two substances act differently, and that while the arsenic increases the number of red corpuscles the iron increases the total quantity of hemoglobin. A rational basis is thus afforded for the therapeutic use of these drugs.—*The Lancet*.

Arterial Sclerosis.

Local sclerosis are but the beginning of general sclerosis, always to be found by those who look for it. The chief characteristics of syphilitic sclerosis are: (1) It is nodular and not diffuse. (2) It has a tendency to invade portions only of a vessel wall. (3) Its onset is usually chronic. (4) The points of attack in order of frequency are: (a) Cerebral arteries; (b) aorta, especially ascending portion of arch; (c) arteries of heart; (d) arteries of pericardium. (5) It has a tendency to obliterate vessels. (6) It has a tendency to form aneurisms. (7) In analogy with tuberculosis it has a tendency to obliterate arteries, to form aneurisms, and to become localized.—*Dr. C. A. Penrose, Johns Hopkins Hospital Bulletin*.

Lumbar Cord Cocainization.

Medullary narcosis seems to be winning its way to popularity with the rapidity with which a new idol gains in favor. It is to be hoped the dangers of the method will not be ignored. There has been at least one death already reported from cocainization of the lumbar cord. Bier reports a list of unpleasant symptoms that may go on for eight days after the cocainization.—*The Medical Age*.

Rectal Alimentation.

Edsall points out the insufficiency of rectal alimentation in keeping up the nutrition of the body, and illustrates it with a carefully observed case. He does not wish to say that it is of little value, for it is sometimes our only resource, but it is only an unsatisfactory makeshift at best by which we can temporarily reduce tissue loss and tide a patient over a period during which the stomach is becoming equal to reception of food, or who is being prepared for operation for removal of mechanical difficulties interfering in taking food by the mouth.—*Jour. A. M. A.*

Alcohol in the Acute Stage of Pneumonia.

It is now accepted that alcohol is a food as well as a stimulant. As a food, it may be employed to replace in part, or to supplement, the food already mentioned. I believe it can be resorted to with advantage much earlier than it is usually administered. With the passing of the inflammatory theory of pneumonia we need not be deterred from its use by the fear of aggravating the local trouble. On the contrary, its distinctly anti-germic property aids in inhibiting the local bacterial activity. As to its antidotal action upon the poison already in the blood, there is much favorable clinical evidence. Many instances are on record in which patients almost *in extremis* have been rescued by the use of twenty or thirty ounces of brandy or whiskey in twenty-four hours. Analogy also points in the same direction. The most efficient treatment yet employed for the bite of venomous reptiles consists in the administration of enormous doses of alcohol, and the same is true of poisoning with carbolic acid.

Alcohol may be employed tentatively at any stage in pneumonia. Its action will be shown to be beneficial if twenty minutes after the dose is taken the pulse becomes less frequent and of greater volume, and the respiration slower and deeper. The duration of the betterment is the key to the amount and the frequency of the dosage. In the case of drunkards we must remember that alcoholic *stimulation* begins only when the quantity given exceeds the habitual allowance in health. Much of the frightful mortality of pneumonia in heavy drinkers is doubtless due to the fact that the depressing effect of the disease too often coincides with the prostration caused by the withdrawal of a large part of the alcohol that has become a necessity of their existence. Our first duty in the case of an "alcoholic" with pneumonia is to see that he gets his full daily measure of spirits. The amount of *stimulation* to be employed is an after consideration.—*Andrew H. Smith, in International Medical Magazine.*

The Canadian Practitioner and Review.

VOL. XXVI. TORONTO, FEBRUARY, 1901. NO. 2.

Original Communications.

SOME POINTS IN THE SURGERY OF THE KIDNEY.*

BY JAMES F. W. ROSS, M.D., TOR.
Associate Professor of Gynecology, Toronto University.

It is impossible to take up the subject of renal surgery except very shortly, in the time at our disposal. To place the subject before you, I intend to draw upon my own experience and that of others in this field.

"Renal surgery dawned on the 6th of August, 1809," says Henry Morris, "when Gustave Simon, of Heidelberg, removed, by the lumbar method, the kidney of a woman who had a ureteral fistula." It had been stated long before, that he who would extirpate the kidney in the human subject must be a madman and a dreamer. We now know that operations upon the kidney are among the most satisfactory and successful performed by the modern surgeon.

GENERAL TECHNIQUE.

The usual technique is carried out for the sterilization of the skin. Operations upon the kidney are usually performed by means of the incision through the abdominal cavity, or the incision in the loin. Incision in the loin is the one most frequently employed. The incision in the right linea seminalis is generally used for the removal of large tumors of the kidney. The lumbar incision has a great many advantages, and, if properly made, ample room can be obtained through which the subsequent manipulations can be carried out.

* Read at meeting of Toronto Clinical Society.

I place the patient on the opposite side to that on which I intend to operate, in a semi-prone position, over a well padded elevated block and sand bags. She is raised sufficiently to produce tension of the quadratus lumborum muscle. The edge of the quadratus lumborum then acts as a guide in the performance of the operation. The incision is made to cross it towards its upper part, and is allowed to swing well away from it downwards and inwards after the crest of the ilium has been closely approached. Unless precautions are taken to bring this incision well down before curving it inwards, the operator is almost certain to invade the peritoneal cavity. The peritoneum can be frequently seen, and the liver can be seen moving with the respirations beyond it. If the peritoneum is cut into, it can readily be closed by catgut suture before anything further is done. The fascia is cut through, and the deeper structures are pulled back by means of the finger. The fascia here surrounds the quadratus lumborum muscle and forms a sheath, just as it does with the rectus muscle in front. If more room is required the incision can be continued upwards and backwards to the edge of the last rib. The incision into these structures increases the wound to a much greater extent than one would suppose from the length of tissue cut through. The rib has been resected, but this can only be necessary in patients who are very closely coupled, or, in other words, in patients who have a very short loin. An increase of the incision downwards does not give much more room around the kidney, but it enables us to deal with the ureter and to trace it downwards to the bladder.

The incision below can be carried across parallel to Poupart's ligament, about an inch above it, and as far as the internal abdominal ring. Such an incision may seem very formidable, but it produces no particular ill effect upon the patient. The yellow fatty capsule of the kidney bulges readily into the wound; this is torn through with forceps, pulled upon, and the kidney soon presents itself in the opening.

NEPHRORRHAPHY, OR NEPHROPEXY.

There are, in surgery, operations that are lauded by some operators and condemned by others. It is difficult to understand how two truthful men can recount such dissimilar experiences. The operation of nephropexy is one of these operations. Its performance is satisfactory in the hands of some, and unsatisfactory in the hands of others. While Morris is loud in his praises, Tait has remarked that out of seventy-four operations performed up to that time, there were three upon which he looked back with inexpressible regret. These cases were

ones in which he was induced, by the excessive pressure of other people, to perform the operation of nephropexy. He says: "I do not know any subject upon which more nonsense has been written than that of movable kidney. I have said over and over again that, in my experience, all enlarged kidneys become more freely movable in the horizontal direction than they are normally. I am still of the opinion that the condition of mesonephron, which we know of only in museums, is not a matter of surgical importance. Yet, in spite of this, I have been persuaded to perform three of these useless and unscientific operations, with the result that not one of the patients has been benefited in the least. I shall have nothing more to do with fixing kidneys."

In a reprint before me, from the *Medical News*, some cases are detailed by one operator, and in each of these cases there was a fabulous amount of trouble.

CASE 1—Chronic metritis and antelexion. Curettage and amputation of the cervix. Cysts of both ovaries; bilateral ovariectomy and ventral fixation; diffuse chronic nephritis; movable right kidney, right nephropexy. Finally, perfect health.

CASE 2—Right movable kidney, left movable kidney, endometritis, salpingo-oophoritis sinistra; nephritis diffusa chronica; hysteria; bilateral nephropexy. Right kidney again became movable. History ends.

CASE 3—Movable right kidney; chronic interstitial nephritis; endometritis; bilateral salpingo-oophoritis. Nephropexy. Symptoms disappeared for eight to ten months; kidney again became movable as ever.

CASE 4—Right and left movable kidney. Chronic appendicitis. Bilateral oophoritis; chronic nephritis; bilateral nephropexy. Pain persisting in the left kidney, mark you, disappeared after inversion of the vermiform appendix on the right side, and breaking up of ovarian adhesions.

CASE 5—Movable right kidney; chronic metritis; chronic pelvic peritonitis; chronic appendicitis; chronic interstitial nephritis; nephropexy. Curettage of the uterus; amputation of the cervix.

It is to this sort of thing that Mr. Lawson Tait refers. The above detailed cases are neurotics, patients suffering from neurasthenia who were treated in the olden days, before the dawn of aseptic surgery, by the old-fashioned family physician, and were cured without surgical interference. If you desire unsatisfactory results, operate on such patients. If you desire to be surgically busy, operate on such patients. I, myself, am not anxious to treat these patients in this way, and will operate on no more neurasthenics for the relief of symptoms that are

supposed to be due to somewhat movable kidneys. Fortunately, or perhaps unfortunately, patients can go through such ordeals and recover health.

I have made a calculation that one operator has seen 3,593 cases of movable kidney, according to his own statements.

The first operation, as performed by Hahn, consisted in drawing the fatty capsule of the kidney taut and stitching it into the wound. It was soon found that this did not hold the organ in place. The kidney was then stitched into the wound, some stitching it to the skin and others to the transversalis fascia and aponeurosis of the transversalis muscle. It was still found that if the sutures were removed, and if the wound was aseptic and no suppuration was produced, the kidney became again movable. I have endeavored to keep the kidney in place by leaving the sutures in for several months, with the ends projecting through the skin. I found it difficult to remove these sutures, and even after they had been removed, the kidney, in some cases, became again movable. I am convinced that nothing but the buried suture will hold the organ in place, and that the suture must go deeply through the renal structure and must include plenty of the tough fascia or aponeurosis above mentioned.

Many objections have been raised to the buried suture. Sinuses were found that continued to discharge for a long time, subsequent to operation; the sutures were no doubt infected. Fenger says that it is impossible to operate upon the kidney without meeting with infection. He considers that the infection is in the urine. The stitch that is less likely to become infected, than any other, is the silkworm-gut suture, or the silver wire. Silkworm-gut suture answers every purpose, but, unless carefully managed as to the knot, is liable to produce considerable irritation. Morris prefers silk. He states that he has had ample opportunity of observing the silk a long time after the performance of the operation, and has found it nicely imbedded in thickened inflammatory tissue, doing its work well and holding the organ up in its place. If a large amount of suppuration is produced in the wound the kidney will undoubtedly remain fixed, but such an amount of suppuration endangers the life of the patient.

I have had an opportunity of observing this fixation of the kidney following suppuration in the wound. I operated on a Mrs. D. and she very nearly lost her life as a consequence. Gauze was packed down into the wound to favor healing by granulation. The wound suppurated. She recovered, and some years after again entered the hospital, suffering from what we supposed was tubercular meningitis. At the *post mortem* examination the kidney was so firmly fixed that it could

scarcely be torn away from the side. I must say, however, that the after history of most of my cases has been unsatisfactory.

The operation is one that can be easily performed. The kidney can be brought out on to the surface of the loin and thoroughly explored; the suturing can then be begun. When sutured it should be placed about in the normal position. The mortality of the operation is practically nil.

Because the kidney became movable after operation, Vulliet, of Geneva, suggested that it should be fixed by transplanting through its substance a slip of the tendon of the erector spinæ muscle. This method does not seem to have found favor. Operators thought that it was necessary to strip away the capsule from the kidney in order that the bare kidney substance could become fixed in the wound. I am satisfied that this is not necessary.

NEPHROTOMY.

It is to be hoped that a greater acquaintance, on the part of the profession, with diseases of the kidney will enable us, as surgeons, to deal with these cases before the organ has been damaged to any very great extent. We do not see as many cases of suppurating kidney and advanced septicemia as we saw a few years ago. Our methods of diagnosis have been improved and, as in the abdominal cavity so in operations on the loin, the exploratory operation has come to stay. When, however, a tumor is to be found, no one hesitates to advise immediate operation.

Tumors of the kidney can readily be differentiated from tumors of other organs, and even though at times it is impossible to differentiate these growths, surgical interference is urgently called for. I have, myself, been unable during the performance of an operation to decide between suppurating gall-bladder and suppurating kidney. During the first part of the operation I thought the tumor was one of the kidney, then felt disposed to believe that it was a tumor of the gall-bladder, then finally satisfied myself that it was kidney, and after opening it removed several gall stones. The only relief to be obtained was by a surgical procedure; different, it is true, in the two instances. But, as a rule, we are able to satisfy ourselves that a fixed tumor in either loin, extending through to the palpating hand behind, is a tumor of the kidney, and if pus is found in the urine, especially in acid urine, the diagnosis is complete, or at any rate we think so. But, within the past week, I have had a rude awakening in a patient passing pus with acid urine, and with a mass in the right loin extending through to the back. I operated, and found the mass

to be an enormous tongue of the liver projecting down in front of the right kidney, extending fully to the crest of the ilium. The origin of the pus has not yet been determined.

An incision into a tumor of the loin is not free from danger. If such tumors be malignant and simulate pus collections, primary incision may be accompanied by uncontrollable hemorrhage. This occurred in one case that had been under my care, after operation was performed on the patient in a neighboring city. I was satisfied the tumor was malignant; others thought it was a hydronephrosis. The young lad bled to death after nephrotomy. The operation was performed by a most eminent surgeon. The tumor proved to be one of villous cancer of the kidney.

I saw another case in which an aneurysm was taken to be a large kidney. As a rule, however, the kidney tissue has an appearance of its own, just as placenta has an appearance of its own and enables us to distinguish it from a piece of beefsteak. If the kidney is thoroughly examined before any incision is made into its substance, the operator should be enabled to diagnose between fluid collections and malignant growths. Tubercle produces a peculiar appearance resembling the arbor vitæ; on the surface the tubercular kidney is mottled with these patches. A kidney containing pus fluctuates in either one or more places and is enlarged. An exploring needle should always be used, if there is any doubt, before the scalpel is inserted. I pass the scalpel and then push in a pair of artery forceps, open the blades and draw them out so as to tear an opening through the kidney structure that allows a free escape of pus. If a stone is found in the centre of the abscess it is removed. If cheesy *debris* or tubercular material is present, the abscess cavities are scraped. The operator must endeavor to enter all abscess cavities. Unless this is done the fever will continue and the patient will not convalesce rapidly.

If the kidney be hydronephrotic an effort should be made to ascertain the cause of the trouble. If nearly all the kidney structure is destroyed it is wise to remove the kidney. If, however, a large portion of kidney structure still remains, partial removal of the organ is in order, or the sac may be fastened, as in pyonephrosis, in the wound and drained. Before this is done it is advisable to catheterize the ureter. If the ureter has been blocked by a stone the stone should be removed. The urine then passing by the natural channel into the bladder, the healthy structure of the hydronephrotic kidney may still be of great service to the patient in his subsequent lifetime.

The tendency of all operators should be conservative. There was a time when the kidney was removed because it was movable. Such an operation, at the present day, would not for a moment be considered.

The advisability of draining a hydronephrotic kidney, temptingly movable and easily removable, was impressed upon me by one of my cases. A young girl had a tumor in the right loin which was supposed by some to be an ovarian cyst, by others to be hydronephrosis. I operated through the loin, feeling satisfied that the tumor was one of the kidney, tapped the tumor and drew it out; with it came the kidney. A ligature could have been thrown about the pedicle with the greatest ease, and the whole kidney could have been removed, but, imbued with the force of Mr. Morris' statement, that we should grow more conservative in these cases than we had been in the past, I decided to fasten the cyst wall in the wound. Several of my confrères thought that I should have performed nephrectomy. Two weeks after the first operation, the temperature became elevated and a swelling appeared over the other kidney, and abscess formed in it. This had evidently been forming coincidently with the one on the right side. I opened and drained this abscess and was now satisfied that the disease was tubercular, although at the first operation I thought the cyst was scarcely of tubercular origin. The patient has since succumbed to pulmonary phthisis.

We must always remember that in operations on tubercular kidney, there is a danger that the other kidney is already affected. Up to the present time I have always refrained from removing the tubercular kidney as a primary operation, unless it was entirely disorganized at the time. On two occasions the kidney was so disorganized that nothing but a shell was left, with no secreting structure, and immediate nephrectomy was performed. The patients recovered from the operation; one is still living and the other has succumbed to pulmonary phthisis.

In all the other cases of tubercle simple nephrotomy has been performed, and the kidney has been taken out at a subsequent period when the patient has recovered from the emaciation and loss of strength consequent upon the septicemia, when the strength is much better able to withstand the shock of the more serious operation. Even though the tubercular kidney is removed, we must take the risk of acute tuberculosis and this tuberculosis may set in after a nephrotomy before the convalescence is completely established.

It is marvellous to note the improvement of these patients after the pus has been drained from the kidney. They put on many pounds in weight, and begin to look robust and hearty.

It is much more difficult to remove a kidney after it has been nephrotomized. If hemorrhage is troublesome after nephrotomy, it can usually be controlled by means of packing, together with a pad in front of the loin and a firm bandage. If the hemorrhage is arterial, forceps may be applied on the bleeding vessels, and left *in situ* for twenty-four hours. I have con-

cluded that it is always possible to control hemorrhage in these cases if the kidney be properly exposed, and the proper means to control the hemorrhage be adopted. I have left six or eight forceps hanging out of the wound just as we leave forceps in the vagina after the performance of a vaginal hysterectomy. Forceps can be applied where it is difficult to fasten a ligature. But surely, with forceps and catgut ligatures and packing, no patient should be allowed to bleed to death, nor should nephrectomy become imperative.

It is not necessary for me to delay you with the subsequent details of this operation. A drainage tube is usually placed into the lower part of the wound, outside of the kidney, and another into the different abscess cavities. These may or may not be irrigated, according to the leanings of the surgeon in charge.

Death rarely results from nephrotomy *per se*, but results as a consequence of the gravity of the disease that is present.

PARTIAL EXCISION OF THE KIDNEY.

Portions of the kidney may be cut out. This has been done on many occasions. A V-shaped piece may be taken out, containing a tubercular focus, and the edges and deeper structures may be brought together by means of catgut sutures to check the hemorrhage. Catgut can always be applied to renal vessels without producing any nucleus for the subsequent formation of stone. The catgut is absorbed and disappears.

Many of these cases on which such operations have been performed, have healed without sinuses. In injuries of the kidney it may be possible to perform partial excision. When innocent growths are found they may be removed.

NEPHRECTOMY.

The technique of this operation is difficult in some cases. When the operation is performed through the abdominal cavity, the peritoneum is incised over the tumor, and stripped backwards, so that the kidney lies free. The vessels are then isolated, the ureter is tied off or removed if diseased; if not removed, some operators prefer to bring the end of the ureter into the wound so that there may be no septic nucleus left behind. The vessels are then ligated, either by means of a blunt aneurysm needle carrying the ligature around them, encircling them *en masse*, or they are tied individually, while the pedicle is compressed by forceps. The loose portion of the peritoneum that formerly covered the growth, may now be allowed to drop back with or without suture of its edges by running catgut sutures. The blood that may clot in this

pouch should be removed, and any actively bleeding vessel should be controlled by ligature to prevent a subsequent deposit of clot there.

When the operation is performed through the loin, the incision must be freely extended downwards and inwards as previously described. Wide retractors are needed to hold back the peritoneum and the enclosed intestines. The kidney can be brought well out on the surface of the loin. Care must be taken not to exert too great tension on the pedicle. The vessels are isolated by means of dressing forceps and the handle of the scalpel; the ureters are also isolated and ligated or removed.

The operation is a very difficult one to perform if old abscesses have been discharging through sinuses and, as a consequence, much septic material has been deposited in the surrounding tissues. As a consequence of this septic infiltration, the tissues become cartilaginous. The mouths of the capillaries seem to remain open, and they pour forth blood freely. The bleeding is a considerable factor to be dealt with. Nothing but a rapid operation, under such circumstances, will save some of these debilitated patients. When the pedicle has been reached, the kidney tissue and the surrounding tissue supplied through it, ceases to bleed. The pedicle, in many cases, is found friable and infiltrated with septic material. In ligating it, a large-sized ligature should be used in order that pressure may be produced, and that the tissue may not be cut into. After the kidney has been removed, if the fatty capsule still remains movable and normal in appearance so that it can be drawn forward, it should be stitched to the skin. In this way a pouch is formed that may act as a guide to the stump in case any secondary hemorrhage supervenes. All actively bleeding vessels should now be controlled before the wound is finally closed. This precaution should not be neglected. If the fatty capsule forms the above-mentioned pouch, any infection produced by the ureter is likely to find its way readily to the surface. Sometimes infection produced deep down in the lower part of the wound by a contaminated ureter, may be troublesome. I have seen such suppuration burrow down to the pelvis, and produce a prolonged and tedious convalescence.

The shock of a nephrectomy, as a rule, is great. The pulse drops to 45 in a minute, and the patient must be rallied by stimulants. Stimulants should be ready, as well as hot water bottles to place about the patient during the performance of the operation. I believe it is wise, under such circumstances, to place the patient's feet in hot water.

To do a nephrectomy on one kidney while the opposite organ holds a calculus puts the life of the patient in great danger.

The nephrectomy may, however, be carried out after the stone has been removed from the other kidney.

I have already said that nephrectomy should not be performed for hydronephrosis except in certain cases. As a primary operation for injuries of the ureter it is unjustifiable. If the patient cannot be relieved by plastic operations then a nephrectomy may be the final resource. Of late I have said that conservative surgery advises the fixation of a movable kidney and not its removal, the thorough irrigation of a pyonephrosis with curettage, or even partial excision, rather than a nephrectomy.

In placing the ligature on the pedicle the novice should be careful to thoroughly isolate the vessels. I lost one patient owing to neglect of this precaution. The tumor was a large sarcoma of the kidney. I had never removed a kidney. It was difficult to reach the upper portion of the tumor owing to the fact that the ribs and the liver were in the way. I sometimes have thought that we get better control of our tumor through the lumbar region than by the transperitoneal incision. A small wedge-shaped portion of the tumor was included in the ligature. I saw this and endeavored to remedy the defect, but the ligature slipped and the woman was almost bloodless within a few seconds. I grasped the vessel with my fingers, mopped away the blood, placed forceps when I could see the stump, placed the ligature and returned the patient to bed. She was almost pulseless. Owing to the hasty and imperfect technique, septic infection of blood clot collected in the space formerly occupied by the kidney set in, the patient developed septic diphtheria of mouth, throat, rectum and vagina, and died.

Several patients from whom I have removed tubercular kidneys are still in the enjoyment of good health. I doubt whether the conclusion that has been drawn, that the mortality of primary nephrectomy is greater than that of secondary nephrectomy, is based upon sound statistics. If primary nephrectomy is performed upon patients, debilitated as a consequence of pus absorption, the mortality will be very high. But, again, the risk of operation is very much increased as a consequence of the fixation of a kidney bound down among septic sinuses. I scarcely think, however, that the one risk counterbalances the other. For my own part I have found it better to do primary nephrotomy and secondary nephrectomy with its accompanying difficulties. A large portion of the weight of responsibility hangs upon the shoulders of the surgeon. If prepared to cope with these difficulties rapidly, carefully, and with the skill acquired by long experience, he can save most of his patients.

Careful estimation of the quantity of urea eliminated should be made before nephrectomy is undertaken. If this is well up

to the average, the operation is attended with much less danger than if the quantity is much diminished.

NEPHROLITHOTOMY.

The surgery of stone in the kidney necessitates a knowledge that enables one to diagnose the condition. There is nothing that disorganizes a kidney more than the presence of a calculus. This disorganization takes place gradually, and if the stone is recognized early and removed, the disorganization is prevented. Operators have been too timid in the past, and it is only in late years that bold surgical procedures have been carried out for the relief of this condition.

Diagnosis.—Tubercle has a tendency to confine itself for a considerable time to the genito-urinary organs on the same side of the body. Stone in the kidney has a tendency to confine itself to one side for a considerable time. As the stone may pass down into the ureter and obstruct it, and as tubercular disease may also descend, the two conditions simulate one another still further.

Morris says that when stone or tubercle of the kidney is suspected in the male, careful examination, per rectum, of the prostate and vesiculæ seminales should be carried out. The presence of minute worm-like threads of mucus, visible to the eye, in the urine, feebly acid, neutral or even alkaline, points to prostatic disease. Urine containing a large quantity of pus and unusually acid, without the presence of these worm-like threads of mucus, points to tubercular disease of the kidney. Such quantities of pus are scarcely likely to be found in the urine if stone in the kidney is present unless considerable disorganization of the organ has taken place. If the stone is in the pelvis of the kidney, the kidney is more liable to become pyonephrotic and more pus, as a consequence, is found in the urine.

Mistakes in the diagnosis are more likely to be made in women than in men, because neurasthenia is more frequently met with in females, and neurasthenic patients are very liable to complain of pains that may simulate closely stone in the kidney. One of the most important signs of stone in the kidney is pain on deep local pressure over a small area below the last rib. When the urine is examined there may be only a microscopical show of blood. Pus, in such cases, is frequently present, and, if present, is found only in a small amount. After exercise such patients may pass a considerable quantity of blood in the urine. If it is now found that the hemorrhage is reduced by rest and brought on again by active exercise, we may be assured that the patient is suffering from stone in the kidney. I have seen such hemorrhage after exercise in cases of stone in the

bladder. This must be eliminated by means of the sound. If no stone is found in the bladder there is likely to be one in the kidney.

We frequently see cases of renal calculus, or its ally, renal tuberculosis, that have been treated for cystitis. Morris is strongly of the opinion that there is no such thing as reflected pain, reflected from one side to the other, and he lays it down as an axiom that the kidney, which ought to be first explored, is the one on the painful side. If both sides are affected, the last side affected should be the one first operated on.

In women an attempt should be made to examine the ends of the ureters digitally. The stone is likely to be on the side on which there is pain or tenderness, or swelling, or a hard contracted condition of the abdominal wall.

One authority states that when calculi have been previously passed, when well marked attacks of renal colic occur, and crystals of uric acid or calcium oxalate are frequently found in the urine, and when the urine is intermittently mixed with a good deal of blood or persistently contains a microscopic quantity, there are the strongest *a priori* grounds for thinking that a stone is present.

It must be remembered that some cases of stone in the kidney are accompanied by nerve symptoms, with or without elevation of temperature. Many of the conditions produced are obscure.

Treatment.—In every case in which a stone is believed or known to be present, the best course is to explore the kidney and remove the stone. This is the opinion of many of the best authorities. Morris says that when, either by accident or systematic examination of the urine, we have cause to suspect the presence of a calculus, we should recommend its immediate removal regardless of the fact that it is not causing renal or transferred pain. He considers that a quiescent calculus is as dangerous to a patient as an unsuspected calculus, and that it ought to be removed. And, further, that the old exploded teaching, that a renal calculus if causing only mild symptoms, should be treated on the expectant plan, should be discarded as unsound in theory and dangerous in practice. We must not wait for these calculi to become encysted or spontaneously expelled.

Surely this is advice worth following, coming as it does from one of the greatest, if not the greatest, of living nephrolithotomists. We cannot be sure that the stone will become encysted, and if no encystment occurs valuable time is lost.

The mortality of these operations shows that a kidney that is not suppurating can be cut into with much greater safety than a kidney that is suppurating or, in other words, that danger

from operative procedures is increased after the disease has progressed to greater limits. Some operators think that it is advisable to rest the patient in bed for a time before submitting them to operation.

Calculus pyonephrosis is produced by long continued irritation. Progressive destruction of the kidney takes place. There is no reason why this should ever occur if physicians would recommend early operations for stone in the kidney. We do not leave stone in the bladder for any length of time after it has been diagnosed, and why should we vary this procedure and leave a stone in the kidney? The failure to find a stone is not a failure of treatment, because there are many curable morbid conditions that simulate renal calculus. These conditions can only be discovered by an exploratory operation. Tuberculous disease may be found and treated; misplaced kidney may be fixed; a solid renal or perirenal tumor may be excised; a tense cyst may be punctured and drained; extravasated blood beneath the fibrous capsule, or in the interior of the kidney, may be let out; suppurating cysts may be opened; adherent kidney may be loosened up from its adhesions; unsuspected stricture of the ureter may be found. (Morris.)

All the authorities are of the same opinion, namely, that many cases in which nothing is found upon exploration are markedly improved. Many have permanent relief from their symptoms. Something beneficial is done by operation. Kendal Franks thinks this improvement is due to the fact that many nerves are divided during the operation.

NEPHROLITHOTOMY OPERATION.

The kidney is exposed and brought out to the loin for inspection. Needling has been advised, but has led many operators astray. The kidney may be opened and no calculus found. Tait says: "I would rather discover the failure with my finger tips than be led astray by prodding the kidney with a skewer."

If the organ is grasped with the thumb and finger before and behind it, so as to control the hemorrhage, it may be split from end to end along its convex border. If a calculus can be felt it may be removed by direct incision over it. This grasping of the kidney with the fingers serves a double purpose, it limits hemorrhage and prevents a small calculus from dropping into the ureter. It is immaterial whether a calculus is removed through the parenchyma or the infundibulum of the kidney. There is no greater escape of urine in one case than in the other if the opening in the infundibulum is properly closed with catgut sutures.

Many cases are recorded in which the kidney has been

explored for stone, and no stone has been found until a more thorough examination was instituted *post mortem*.

Bruce Clarke records an interesting case of this nature. He operated on a patient who had a very movable kidney. The symptoms were pain and a small quantity of blood in the urine. There had never been any pus found. The kidney was needled at the first operation and fastened to the side. Symptoms abated, but recurred, pain was excruciating. At the second operation the kidney was opened thoroughly and examined, but no stone was found. The kidney was removed and after a careful examination a stone, the size of a good sized pea, with prickly spines on its surface, was discovered imbedded in the kidney tissue. The patient's pain disappeared.

Surely this reminds us of the old saying that "the mountain was in labor and brought forth a mouse." It was unfortunate that the stone was not discovered before the kidney was removed. It teaches the lesson that every effort should be made to thoroughly examine the organ before anything further is done.

In all cases the ureter should be catheterized to determine its patency. If this cannot be done through the parenchyma of the organ, an opening can be made into the infundibulum, care being taken of course not to open a vein in mistake for the pelvis of the kidney. The catheter can be passed down through this opening and the opening can be subsequently closed by catgut suture.

By means of force pressure, good light, competent assistants and ligatures, together with the pressure of the thumb and finger on the pelvic border of the kidney, and through and through sutures of catgut, hemorrhage can be controlled both temporarily and permanently. When the two flaps of the organ are brought together and stitched firmly the smaller vessels cease bleeding; the larger vessels should be controlled before this is done.

Fenger has related a case of gangrene of the kidney following operation. This is a rare occurrence, but we must remember that it can occur.

HYDATID CYST OF THE TAIL OF THE PANCREAS.*

BY GEORGE A. PETERS, M.B., F.R.C.S., ENG.

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E. I., aged 20, a native of Argentine Republic, South America. Came, in May, 1900, under the care of Dr. McKinnon, of Guelph, who furnishes the following history: For two or three years patient has had attacks of pain, obscurely located in the stomach and bowels. In August he had an attack of appendicitis, and was operated upon with a good result. At that time a tumor could be distinctly made out in the left hypochondriac region. The mass was rounded, tense, and slightly movable. It was somewhat tender, and at times was the seat of intense and persistent pain, probably due to pressure on the coeliac plexus (coeliac neuralgia).

September 20th, 1900, the pain became steadily severe, and the tumor seemed to increase considerably in size. His temperature was very variable, ranging from normal to 102-4, the pulse sometimes running as high as 110 or 120.

October 7th, morning temperature, 102°; evening, 104°; pain and distress very great. Dr. McKinnon aspirated the tumor, which he had correctly judged to be cystic, and removed twenty ounces of limpid fluid, faintly alkaline, odorless, free from albumen, and with specific gravity 1012. No microscopic examination was made. Very considerable relief followed the aspiration for some days, but the cyst slowly filled again, and the temperature and pulse showed a continuation of the disturbed health which was present before the operation of tapping.

October 29th, 1900. First seen by the writer, in consultation with Dr. McKinnon. The condition made out was as follows: Patient rather thin; confined to bed. Suffering from fever, with evening temperature reaching 104. Pulse generally over 100. Some sweating. The urine is normal.

Local Conditions.—A rounded tumor, about as large as a cocoanut, can be felt below the ribs on the left side, with its centre about midway between the nipple and sternal lines. The mass is tense to the feel, and elastic; but no distinct sense of fluctuation can be elicited.

Its relations to the pancreas are determined by the easy detection of stomach resonance above the tumor, and between it and

* Read at meeting of Toronto Clinical Society.

the liver, and of colon resonance below. For the purpose of clearly making out the line of the colon, air was injected into it, per rectum, as recommended by Kocher.

Stomach resonance can also be detected between the tumor and the normal situation of the spleen, while the kidney is excluded as the seat of the disease by the presence of colic resonance in the flank below the last rib, as well as between the normal area of renal dulness and the tumor.

By pressing the tumor very firmly from the front, it can be felt at the back, below the twelfth rib. The mass descends very slightly on deep inspiration, but is clearly attached to the posterior abdominal wall. No pulsation can be felt.

Having, by careful differentiation, decided that the cyst was connected with the tail of the pancreas, we determined to open it, if possible, from behind, according to the advice and practice of Cathcart and Caird, of Edinburgh.

Operation.—An incision, about three inches long, was made from the margin of the erector spinæ forward, about parallel to the twelfth rib, and curving slightly upwards around its end in the direction of the margin of the costal cartilages. On rapidly deepening the wound, the lumbar fascia was divided, the colon displaced forwards with the peritoneum, and the kidney, surrounded by its fat, was found lying in its normal position, and obviously quite healthy. The further dissection was done largely by the finger and the handle of the scalpel, keeping in front of the kidney and well clear of its vessels.

On pressing the finger, upwards, forwards and inwards, the cyst could now be reached when very firm pressure was made from the front. A long hypodermic needle was inserted, and a very peculiar, dirty-grey fluid was withdrawn. With the needle as a guide, the cyst was incised, with some difficulty, owing to its depth from the surface and the toughness and resistance of its wall. To one accustomed to dealing with hydatids I have no doubt that this condition of toughness would immediately have suggested the true nature of the cyst, but as hydatid disease is very rare in this country, this being our first experience of it, we did not recognize the parasitic character of the neoplasm until the hooklets were discovered subsequently under the microscope.

On opening the cyst, some three or four ounces of sero-purulent fluid escaped, in which were suspended shreds of yellowish-grey matter, which were, as we now know, probably disintegrated daughter cysts.

On passing the finger into the cavity it was found to have a thin but very dense and resistant wall, which was roughened by the presence of broken down material similar to that which escaped. A microscopic examination of the contents showed

numerous brood-cysts, with their attached embryos in varying degrees of disintegration, as well as multitudes of the characteristic hooklets. It is highly probable that the process of tapping three weeks previously had resulted in the death of the parasite, as frequently occurs.

Note on November 5th. The patient shows slow but progressive improvement since the operation. The pain has disappeared and the appetite is returning. The wound continues to discharge some pus, and the cyst wall is coming away in shreds. The evening temperature still reaches 102° - 103° .

January 1st, 1901. The patient has recovered sufficiently to leave the hospital and resume his work as a student, still, however, with a sinus, which discharges a small amount of fluid.

From his history, it is evident that the patient brought the parasite with him from the Argentine Republic. Nevertheless the disease appears to be quite uncommon in that country. Dogs appear to be almost the only animals in which the sexually mature form of the *taenia echinococcus* flourishes, while the herbivora and man act as the alternate hosts of the bladder form (the hydatid). However, there is very little sheep-ranching done in the district from which the patient hails, nor are dogs numerous or closely associated with man as they are among the dwellers in the more frigid zones.

Hydatid of the pancreas is extremely rare, though not unknown. In a series of 986 cases of hydatids in man collected by Neisser, the distribution is as follows: Liver, 451; lungs and pleura, 84; kidneys, 80; muscles and subcut. tiss., 72; brain, 68; sp. cord, 13; female organs and mammæ, 44; male organs, 6; pelvis, 36; organs of circulation, 29; spleen and bones, 28; eye, 3; pancreas, *none*.

However, Graham, the Superintendent of Prince Alfred Hospital, Sydney, Australia, who has had a very wide experience of hydatids, says in his excellent monograph on "Hydatid Disease," "The hydatid is sometimes found in the pancreas. I have observed it as a cyst about three inches in diameter, replacing the head of the organ. . . . The diagnosis of a hydatid cyst in the pancreas will depend on the size it has attained, and on its position in relation to the organ, and whether the organ has become sufficiently involved so as to have its function completely interfered with."*

The diagnosis of hydatid cyst of the pancreas in the case above reported is, of course, open to the criticism that there was no actual dissection to establish its location, but the clinical signs and symptoms seem to me to be sufficiently conclusive.

* Graham, Hydatid Disease in its Clinical Aspects. Young J. Pentland, Edin., 1891.

In regard to treatment of hydatid cysts, the very full discussion of Graham may be briefly summarized thus: Medicinal treatment by kamala, turpentine, iodide and bromide of potash, mercury, etc., is "absolutely without benefit." Practically the same may be said of electricity. Tapping has many advocates, and has scored some reliable cures; but the operation is not free from dangers of shock, peritonitis and hemorrhage, and a number of very sudden deaths are recorded.

By far the best results have followed direct incision with as complete an evacuation of the cyst contents as possible, and efficient drainage. Where it is possible to do so, the cyst wall should be stitched to the edges of the external wound at the time the incision is made, great care being observed to prevent escape of the cyst contents into the peritoneum or pleura. Where a cyst in the abdomen is so situated that its wall cannot be brought up to the anterior abdominal wall, one of two courses may be followed: (1) The operation may be done in two stages, aseptic gauze being packed at the time of the first incision in such a way as to excite adhesions, and thus create a sort of "coffer-dam" approach to the cyst, or (2) the cyst may be opened, as in this case, from behind.

In regard to the treatment of cyst of the pancreas, it seems to me contrary to the principles of surgery to approach it from the front if it can possibly be reached from behind. The pancreas is essentially a retro-peritoneal organ, and since in its enlargement a cyst of that organ almost always approaches the anterior abdominal wall by crowding the stomach upwards and the transverse colon downward, to reach it by a transperitoneal route involves dividing the peritoneum four times, viz., the parietal layer, two layers of the gastro-colic omentum, and the layer covering the cyst.

Moreover, it is easy and safe, by blunt dissection, to raise the peritoneum from the kidney and posterior wall of the abdomen, and I submit that any cyst of the pancreas which can be palpated from behind, or even *from the side*, can be opened and drained more effectively and more safely by that route than by the transperitoneal route. The difficulty would perhaps be greater where the cyst occupied the head of the pancreas, since the duodenum and the portal vessels would require to have due consideration given to their position. However, cysts of the head of the pancreas are rare, and though I know of no data on the matter, anatomical considerations would lead one to expect that the tendency of the cyst would be to crowd these structures aside, so as to allow it to be approached from the loin, as on the left side.

A CASE OF DYSTOCIA FROM UTERUS BICORNIS WITH CONTRACTED PELVIS.*

BY K. C. McILWRAITH, M.D., TORONTO.

Mrs. S——, aged 23, primipara. The history of pregnancy was as follows: She continued to menstruate for three months after the inception of pregnancy. She then, as far as she could remember, missed two periods. Menstruation returned twice, and was absent during the last ten weeks of gestation.

I saw her about noon on October 25th. She had then been having labor pains for seven hours. The cervix was not taken up; the os admitted one finger. The abdominal walls were not thick, but the presentation was, nevertheless, difficult to make out. I finally determined the following points: Head presenting, not fixed in the brim; back to the right; breech in the extreme left hypochondriac region. At the place where one should normally have felt only the arch of the back was a large mass extending up to the right hypochondriac region, where one would expect to find the fundus uteri. The mass was especially prominent during uterine contraction, of doughy consistency, not resonant on percussion, and over it the uterine soufflé was heard with especial clearness.

The pains continued all day, and by 10 o'clock at night the liquor amnii was coming away, the head was still freely moveable above the brim, the cervix was obliterated, but the os was only the size of a quarter dollar.

By noon the next day it had dilated to the size of a half dollar, and the patient was becoming exhausted, having now been in labor thirty hours.

I had the patient anesthetized by an assistant, introduced my hand partially into the vagina, and dilated the os manually. A posterior position of the occiput was easily made out, and as easily corrected by rotation. By means of the hand in the vagina I made out a slightly shortened conjugate. The question of forceps or version arose, and I determined to decide this by means of the measure recommended by Dührsen. The patient was drawn to the edge of the bed and her legs lowered into Walcher's position. I endeavored to force the head through the brim by abdominal pressure. This failing, I resolved on version, which was easily accomplished, as there was still some liquor amnii remaining, and the body of the child extracted. To get the head through the brim it was necessary to resort to traction with the fingers of one hand in the mouth and the fingers of the other over the shoulders. The child was resusci-

* Read at meeting of Toronto Clinical Society.

tated without difficulty. Manual removal of the placenta was required. On the introduction of the hand into the uterus a septum was found extending about one-third of the distance down the interior of the uterus. The placenta was adherent in the right cornu, which corresponded to the mass mentioned above, and the breech of the child had evidently been in the left cornu. The mother made an uninterrupted recovery.

The diagnosis of the condition per abdomen was of some interest. I have seen tumors, resembling this one on inspection, caused by intestine distended with gas prolapsing in front of the uterus. They, too, became more prominent on uterine contraction, but were resonant on percussion. Uterine fibroid was excluded by the soft consistency of the mass on palpation. Twin pregnancy was partially excluded by the fact that no fetal members could be made out in connection with the mass and no second fetal heart heard.

It was not easy to decide how to extract. In a flat pelvis the head engages with its antero-posterior diameter in the transverse diameter of the brim, and its bi-parietal diameter in the conjugate. Descent is accomplished by the anterior parietal bone sinking down past the symphysis, and then bulging forward beneath it, thereby allowing the descent of the posterior parietal past the promontory. Those who oppose the use of the forceps in these cases claim that the application of the blades to the head causes a bulging in the bi-parietal diameter and thereby increases the difficulty. Milne Murray* and Porter Mathew† have shown that this is the case if the blades be applied obliquely to the head, but that if one blade be applied exactly over the occiput, and the other over the face, that the parietals overlap the frontal and occipital, and the head increases in its vertical and *not* in its transverse diameters under the pressure of the forceps. Milne Murray has, therefore, constructed axis-traction forceps which are specially adapted for use in such cases. The blade is narrower than usual to favor this method of overlapping. He states, moreover, that the forceps with a pelvic curve of a seven-inch radius grasp the head nearer to the symphysis than to the promontory, and so favor the descent of the anterior parietal bone. The use of this instrument has given very good results in the minor degrees of contracted pelvis.

I did not have a pair of forceps of this pattern with me, and as the head would not pass the brim on pressure from without, I decided on version with the good results recorded.

* "Effects of compression on the fetal skull, with special reference to delivery in minor degrees of flat pelvis."—*Ed. Med. Journal*, November, 1888.

† "Clinical Observations on 2,000 Obstetric Cases."—London, 1898.

Society Reports.

TORONTO PATHOLOGICAL SOCIETY.

The first meeting of the year was held in the Biological Building, Queen's Park, on October 27th, 1900.

Dr. Silverthorne, President, in the chair.

Present: Drs. Oldright, King, Carveth, Clarence Starr, Bruce, Hamilton, Anderson, Greig, Goldie, MacKenzie, W. J. Wilson, Thistle, Rudolf, Primrose, Fotheringham, Peters, Parsons.

Visitors: Dr. Coutts, Dr. Macnamara.

Dr. Silverthorne delivered the presidential address.

Dr. A. T. Macnamara presented a specimen of carcinoma of the stomach, with notes and sections, as follows:

Carcinoma of the Stomach.

J. A., aged 69, farmer. For several years past has had occasional attacks of indigestion, which always yielded to treatment. Last February had another attack from which he partially recovered. Then again in May he suffered from pain in the stomach, anorexia, and loss of strength. The cachexia was marked and I suspected cancer, and asked for a consultation. Dr. McPhedran was called and pronounced it cancer in the lesser curvature of the stomach, which was correct, as the autopsy showed.

Vomiting occurred only once during the disease. No history of tarry stools. The temperature was sometimes elevated for a few days in succession. The patient died on September 4th, 1900.

Post Mortem Report.—The post mortem had to be made hurriedly, as the undertaker had injected the abdominal cavity with a strong solution of formalin. The stomach only was removed, the liver and pancreas being examined *in situ*. There was no appearance of secondary growths in the liver and pancreas, but some of the mesenteric glands were enlarged. The stomach showed a large growth involving nearly the whole of the lesser curvature, but neither the cardia nor pylorus was involved. On opening the stomach it was found to contain several ounces of dark fluid. The growth formed a fungating mass on the internal surface.

Microscopical Examination.—Section shows the growth to be a *columnar-celled epithelioma*. The mucosa shows a layer of normal columnar cells. Beneath the muscularis mucosæ is to be seen a group of cells in what is apparently a transition stage. There is some attempt at gland formation, but the cells are not well-formed, the nuclei being round and not oblong.

Then in other parts are groups or clumps of cells massed together, with a small amount of stroma. There is also an area richly supplied with blood-vessels, but the walls of the blood-vessels are not well defined and the area itself is apparently becoming necrotic.

Dr. Anderson, discussing Dr. Macnamara's paper, called attention to the clinical fact illustrated by this case, that vomiting and other gastric symptoms were usually absent or not prominent if the orifices were not involved.

Dr. Goldie, discussing Dr. Macnamara's paper, cites a case of carcinoma of pylorus, with thickening only, surface being quite smooth. On section showed direct invasion of the wall by small gland-like cells (pancreas), with but little attempt at gland arrangement with lamina, the lymphatic system being almost entirely free, only one gland showing in the gross or microscopically any sign of invasion. This case contrasts markedly with Dr. Macnamara's case, which shows a papillomatous condition in which the carcinoma cells retain their gland-like character with columnar shape, while the lymphatic system seems to be widely invaded, and the small nodes beneath the muscous mucosæ being to my eye lymph nodes, invaded by slightly altered cells which line the spaces of the node.

Tumor Removed from the Sterno-Mastoid Muscle.

Dr. Primrose presented a tumor removed from the sterno-mastoid muscle.

The case gave rise to considerable discussion as to the causation or torticollis, and its relation with tumors of and hemorrhages into the sterno-mastoid muscle.

Dr. Clarence L. Starr, discussing Dr. Primrose's paper. The possibility of fibrous infiltration following hematoma, being cause of congenital torticollis is very unlikely. Of some fifty or sixty cases coming under my care, not more than two or three gave history of rupture of sterno-mastoid and subsequent hematoma. Rupture of muscle in other region gives no contraction, and hence we should expect none in this muscle.

Dr. Peters, discussing Dr. Primrose's paper. In regard to the question of atrophy or failure of development found on the depressed side in cases of wry neck, I believe the weight of authority shows that the asymmetry is a result of the malposition and not a part of it. In traumatic cases, though the asymmetry is not present at first, it will in the majority of cases become worked in the course of years.

Dr. Fotheringham, discussing Dr. Primrose's paper, reminded the Fellows of the common occurrence of asymmetry and undevelopment of bones, as well as muscles of face and neck on affected side, and asked them to note the bearing of this

fact upon the question of the connection between traumatic torticollis and that of central origin.

Dr. Oldright, discussing Dr. Primrose's paper, said he had used forceps very frequently, and had never seen a case of torticollis as a result. He had seen many cases in older children, and had not found traumatism in any of them.

Molluscum Contagiosum in the Field Sparrow (*Spezella pusilla*).

—DR. MACKENZIE.

The bird from which the specimen was taken was found fluttering in a ravine, unable to fly.

When examined, it was found to have on one wing a tumor about the size of a hazel-nut, with a somewhat smooth surface, containing a cyst-like cavity in its upper portion, the lower portion being quite solid. On the other wing was a similar tumor, but dry, black and quite hard.

The sections shown are from the first tumor, and an examination of them will show the typical appearance of molluscum contagiosum. The section, at its base, shows proliferate epithelium, with characteristic follicular arrangement; and, as we proceed to the free surface, we see all stages of degeneration of the cells, until at the periphery we find the typical molluscum bodies.

The sections show very clearly that the molluscum body is derived from the epithelial cell by a gradual degeneration of the cell. It begins almost in the lowermost layer by the appearance of a vacuole in the protoplasm. This gradually alters until there is a mass of hyaline-like substance, which stains strongly with acid dyes. The nucleus gradually undergoes degeneration, shrinking and becoming irregular in form, not being pressed back against the wall of the cell, as has been described in the development of the molluscum body in man.

These sections show peculiar chrysalloids in almost every cell, which stain deeply with picric acid orange or eosin.

One section shows very well the relationship of the tumor to the feather follicle, a small feather developing in the midst, with the various layers of the folliculum definitely infected by the disease.

The section shows nothing which could be interpreted as being parasitic structures, and the gradual development of the molluscum body from a substance which is evidently degenerating protoplasm, would exclude the interpretation given it by Ziegler, Neurier, and others.

The infectivity of this disease in birds has been demonstrated by Croker, and the same investigator has experimentally demonstrated its identity with the similar disease in man.

Dr. Goldie, discussing Dr. MacKenzie's paper, presents two

specimens of molluscum contagiosa, one in adult and another in child, showing distinctly it is simply a degeneration, involving only the protoplasm in the case of the adult, while in the case of infant the degeneration is seen to involve the nucleus in nearly all cases. The same bodies may be found in keratosis follicularis.

Carcinoma of the Bladder.

Dr. H. B. Anderson presented four specimens of carcinoma of the bladder.

Dr. Greig showed specimens of typhoid bacillus, demonstrating the presence of flagella by special methods of staining.

The meeting then adjourned.

H. C. PARSONS, *Rec. Sec.*

MEETING, NOVEMBER 24TH, 1900.

The President, Dr. Silverthorne, in the chair.

The following members were present: Drs. King, Peters, McPhedran, Wishart, Starr, Meyers, McKenzie, Bingham, Bruce, Reeve, Primrose, Rudolf, A. Fletcher, Parsons.

Visitors—Drs. Wagner, Copp, and Ryerson.

Dr. C. J. Wagner was proposed for membership by Dr. J. J. McKenzie, seconded by Dr. G. Silverthorne.

Hydatid Cyst of the Pancreas.—DR. PETERS.

History.—Young man, aged 20. Spaniard, born in South America. In May, 1900, at Guelph, had attack of obscure pain in the stomach and bowels. Was operated on in August for appendicitis. A tumor was then made out. Pain was probably due to pressure upon the celiac plexus. Got worse in September. Tumor increased; pulse was up 20 points; temperature, 102° F., a.m.; 104° F., p.m. Dr. McKinnon aspirated. Fluid sp. gr. 1012, free from albumen, alkaline.

Cyst filled again, and seen October 29th for first time by Dr. Peters. Patient then had a temperature of 104° F.; pulse, 100. Sweats, urine normal, tumor size of a cocoanut, stomach resonance above and between it and liver, also after air injected into colon it was outlined. Kidney was excluded. Firm pressure backward brought the tumor to the level of the 10th and 11th ribs. Diagnosed as cyst in tail of pancreas. Opened behind by Greig-Smith's incision. Cyst wall very tough and resistant; was extra-peritoneal. Fluid sero-purulent, oz. 4, with threads of grey matter. Some had hooklets, and were daughter cysts. There is no case recorded of hydatid in the pancreas. Miser, in 968 cases reported, gives liver, 451; lung, 84; kidney, 80; brain, 77; spleen, 28; pancreas, 0. Among other locations, the

taenia echinococcus was found in the dog in Iceland and the cold North; in the sheep in Australia. Dr. Peters exhibited the daughter cysts, and drawings of the echinococcus, and, under the microscope, a daughter cyst, showing the hooklets.

Discussion.—Dr. Rudolf said, Goodhead had said the cyst might be found in any abdominal organ.

Dr. King said: The first fluid was clear, limpid; the last, sero-purulent. Was this due to the aspiration?

Dr. Silverthorne said: If the dog and sheep, with man, completed the life cycle, how did the dog get supplied?

Dr. McPhedran asked if the cystic development was attained in other animals than man.

Dr. J. J. McKenzie said in Australia the shepherds were careful not to drink water because of the eggs.

Case of Cancer of the Uterus.—DR. PETERS.

History.—Age 32. Mother of 2 children. Three years ago, metrorrhagia and profuse loss characterized the periods. She sometime after passed a hard mass the size of an orange, oval, solid. For two and a half years was fairly well; then discharge became sero-purulent and bloody. Curette gave temporary relief. On October 20th, discharge was gangrenous in odor. Temperature, 103° F.; pulse, 120. Scrapings were gangrenous shreds; cancerous patches; did a vaginal hysterectomy.

Specimen.—Cervix abnormally long, three inches; breadth of fundus, four inches; on posterior surface a mass one-half inch in diameter, three-quarter inch long, covered by peritoneum, showing on section a gangrenous mass. Dr. J. J. McKenzie showed a section under the microscope.

Discussion.—Dr. King asked why the cervix was elongated. Passage of a myoma would probably shorten it.

Dr. Bingham asked what were the statistics as to results of operation. No doubt that much pain was saved, and probably a fatal hemorrhage. He had removed a uterus from a woman aged 65, which had almost no cervix.

Reply.—Dr. Peters said he had not looked up statistics. They were unreliable, but there was no doubt as to the propriety of operation.

Two Cases of Duodenal Ulcer.—DR. PARSONS.

CASE 1.—History unsatisfactory. Female, 39 years, alcoholic. July 8th, at 10 a.m., taken into Grace Hospital, in state of collapse. Well the day before. On 9th, at 1 a.m., death occurred suddenly, resembling irritant poison.

Autopsy.—A quarter inch below the margin of pyloric valve was a circular, funnel-shaped opening. Loss of substance in inner coat, a half-inch in diameter; of outer coat, one-eighth of inch.

CASE 2.—Male, aged 29, laborer. At one time he was found in the water closet, having fallen from the seat. In the face was a large quantity of bright red blood, etc. *See report of history.*

Discussion.—Dr. McPhedran: These two cases illustrate the acute and chronic ulcers very typically. The pathology is uncertain quality. The circulation theory is denied by some men. Probably due to arrest of blood supply from any cause, traumatic injury of the mucus membrane and thrombosis of the vessel. Some believe the ulcer due to organism grafted on a localized gastritis in chronic cases. Referred to a case where the thickening in the wall of the stomach, with perforation, led to a diagnosis of carcinoma.

Dr. Peters asked how so much red blood escaped.

Reply.—The hemorrhage must have been very great. There had been no vomiting.

Dr. McPhedran said hemorrhage sufficient to produce collapse had been seen by him, with all the symptoms indicating duodenal involvement.

Dr. Peters: "Does this blood act as an irritant and purgative?"

Dr. King: "Blood drinkers say it is purgative."

Dr. Rudolf said duodenal ulcers were much more common in males; the gastric in females. Was there any explanation?

Dr. McPhedran said men with duodenal ulcers were usually stout men and large feeders.

Polyp Removed from Naso-Pharynx.—DR. GILBERT WISHART.

Dr. Wishart presented a polyp removed from the naso-pharynx of a man aged 26. It was attached by a short pedicle to a point on the septum, close to the level of the soft palate. The growth was lobulated, freely movable, hard, and yellow in color. There was no other pathological condition present, except hypertrophic rhinitis and an anterior deviation of the septum. Growths from the posterior end of the septum are rare. Lennox Brown mentions a lymphoma or polyp attached to the pharyngeal end of the septum, which is really an adenoidal remains. In this case there is no evidence or history of the presence of adenoids.

The specimen will be submitted to a microscopic examination, and reported.

Discussion of Dr. Wishart's communication.—Dr. Silverthorne said the rules ought to be suspended when fresh specimens could be shown. A tumor from the septum, growing anteriorly very rapidly, was malignant, and often recurred.

Dr. Reeve: "It will be interesting to know what it is. It is too hard for myxoma."

Dr. Rudolf was called to the chair.

Melanoma of Rectum, with Metastasis.—DR. SILVERTHORNE.

(To be reported later.)

Discussion.—Dr. Peters said the length of time was not incompatible. He related a case operated on seven times in twenty-five years.

Dr. Reeve said he had removed an eye for secondary glaucoma and melano-sarcoma of coroid. Patient enjoyed good health for fifteen years. Then a tumor of the orbit melanotic was removed from the opposite side. Patient lived two and a half years after second operation. The second was a distinct case from the first operation.

Dr. Peters said from his case secondary growths could take place after many years. He would be inclined to call Dr. Reeve's second tumor secondary, not two primary, as origin must be traceable to pigmented tissue.

Dr. W. McKenzie said under the microscope the cells in the liver did not branch; in the uterus very branched; has the "Habital" (?) of carcinoma.

Dr. Parsons said it did not follow the rule of primary and secondary growths. Sarcoma in the rectum is pigmented, but in the liver was carcinomatous and less pigmented.

Dr. Reeve asked was it usual to have sarcoma develop on an ulcerative surface? Does Dr. Parsons allow for simultaneous occurrences of tumors in different locations? In a case of tumors in both eyes, both removed, and no intervening tissue involved; immunity for six years. This could not have travelled around by the chiasm.

Dr. King: "Is it inconsistent that there should be two growths in this case—the rectum primary sarcoma; the liver primary carcinoma?"

Dr. Peters asked if Dr. Reeve would say that the case reported by him (Dr. P.), and operated on seven times, was each a separate and distinct primary tumor.

Dr. Rudolf: "Is the distribution in the uterus confined to mucus membrane not very peculiar?"

Reply.—The growths from a tumor of fifteen years' standing were improbable in this case. It was much more probably a rapid growth of tumor, with rapid metastasis. The theory of two independent starting points was possible, but improbable. Sarcoma was probably grafted upon an old, probably syphilitic, ulceration. Sarcoma does not ulcerate. As to the shades of color. It was not uncommon to find shades of color. Why the extension went to the mucus membrane of uterus only he could not understand. Very great differences do exist the farther from the primary growth the extension existed.

Dr. Primrose exhibited two specimens: 1st. Evulsion of the

thumb, with 18 inches of the flexor longus pollicis; 2nd. Fracture of humerus into shoulder joint, with evulsion of skin high up.

Dr. Parsons related a case.

Society then adjourned.

H. C. PARSONS, *Rec. Sec.*

TORONTO CLINICAL SOCIETY.

STATED MEETING, JANUARY 2ND, 1901.

The president, Dr. W. H. B. Aikins, occupied the chair.

Amputation at Shoulder Joint.

Dr. A. Primrose presented this patient and recited the history of the case. A man of thirty-five years, last fall, while crossing Queen St., was run down by street car, but the motorman did not know that there was some object under the car until he noticed that something obstructed the wheels. While searching for the obstruction, an arm was brought from the kerb, and then the man was found between the front wheels. The arm had been taken off above the insertion of the deltoid, and the tissues were completely cut through. The wheel of the motor had served as an excellent angiotribe, because he had not lost a teaspoonful of blood. When seen by Dr. Primrose at the Emergency Hospital, the arm, or, rather, stump, was a mass of pulpified tissue, the humerus being broken into three pieces. The upper fragment was fractured into the shoulder joint. The condition of the skin was interesting. There had evidently been an evulsive force, a tubular portion of skin being found in the arm completely separated from the soft tissues. The axillary artery was tied high up, and having done that, cut the nerves as high as possible, and then dissected out the upper fragment of the humerus from the shoulder joint. The patient made a good recovery. There was a small drainage tube in for a few days.

Ex-Ophthalmic Goitre, with Report of Two Cases.

Dr. W. B. Thistle reviewed the causes of this disease, and then reported two cases. The first occurred in a man aged 24 years, and the second in a woman aged 34 years. The woman consulted him for weakness and nervousness; had for some time slight enlargement of the neck, which had recently increased. She was a tall, thin woman, married, having two children. Temperature was slightly elevated; pulse in the neighborhood

of 120 ; prominent eye-balls. For some time had noticed palpitation, and had experienced fear and a sense of nervousness. The gland was punctured, and a dark brown fluid drawn off. A solution of perchloride of iron was injected. Recovery was complete in this case. The second case gave a history of having had Grave's disease some six years ago. Recovery was complete at that time. When admitted to the hospital this time, the patient showed every symptom of the disease. He had lost forty pounds. Temperature elevated slightly. Pulse varied from 130 to 160 ; no murmurs. Had several attacks of syncope ; also troubled with attacks of diarrhea. The treatment was rest in bed, with iodide of potash and belladonna. There was very little general improvement. The tumor which was present in this case was operated on by Dr. Peters, who removed it, as well as a portion of the gland. The patient is now quite well.

Foreign Body in the Eye with Skiagraph.

Dr. G. Stirling Ryerson reported this case, and exhibited the skiagraph. It is very seldom that we have a foreign body in the eye that it is necessary to take a skiagraph of. This was the case of a man doing work, and it was supposed that a portion of a chisel broke off and struck the eye. . . . It was not certain that the portion of steel was in the eye or not ; and it was a very important question, whether the eye should be removed or not. The injury of the eye was not visible through the ophthalmoscope. The skiagraph was entirely successful, and showed where the body was, and also showed its comparative size and shape to some degree. Immediately after the skiagraph was taken, the eye was removed, and it was found that a large portion of steel was firmly imbedded in the eye, and lying somewhat to the inner side of the optic nerve.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, J. FERGUSON, T. M. McMAHON, H. J. HAMILTON,
AND INGERSOLL OLMSTED.

Relation Between Tuberculosis and Neuropathy.

Rossi states (1) that there is an important relation between nervous diseases and tuberculosis. These diseases influence one another, follow one another, and alternate one with the other in the same family. Tuberculous patients have neurotic antecedents in 28.6 per cent. of the cases. Nervous patients have tubercular antecedents in 22.6 per cent. of the cases. (2) The reason of the relation between neuropathy and tuberculosis must be sought for in the vaso-motor disturbances, and in the disturbances of nutrition, which the changes in the nervous system produce in the organs, thus predisposing the organism to tubercular infection. (3) This relation can be explained by the state of the vagus, which influences nutrition, the functions of the lungs and infection. (4) Perhaps the antagonism, which is said to exist between tuberculosis and cerebral hemorrhage, has no existence. According to Rossi, apoplexy is seen with a frequency of 9 per cent. in the families of the tuberculous, and out of 111 cases of tuberculosis with neurotic antecedents, 35 presented cerebral apoplexy in their families, that is to say, in 31.7 per cent. of the cases. Translated from *Giornale Internazionale delle Scienze Mediche*, by HARLEY SMITH.

Complete Anuria Without Uremia.

Rénon has observed a case of complete anuria lasting seven days, terminating fatally without uremic symptoms. The patient was an old man, 69 years of age, suffering from right hemiplegia with secondary contracture and weakening of the faculties. His arteries were atheromatous, the heart was enlarged, the aortic orifice dilated, etc., etc. After having had some wandering pains in the right lumbar region, he presented complete anuria without uremic symptoms. The patient died with signs of pseudo-bulbar paralysis on the third day of a second crisis of anuria. At the autopsy, the kidneys were found large and filled with uric acid calculi, the liver cirrhotic, the heart hypertrophied, with atheroma of the mitral and aortic valves; and two foci of softening, one in the left cerebral hemisphere, the other, smaller, in the medulla. Notwithstanding the existence of all these lesions, the patient resisted his

anuria for seven days without presenting the least disturbance. This case supports Widál's ideas as to the complexity of the factors of uremia.

Merklen states that only after eight or nine days does anuria determine uremic symptoms; that therefore we must not be surprised if these symptoms were not found in Rénon's patient, as the crisis of anuria disappeared after the seventh day. Translated from *Giornale Intern. delle Scienze Med.*, by HARLEY SMITH.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF J. CAVEN, W. GOLDIE, AND J. AMYOT.

The Justus Blood-test for Syphilis.

Jones (*New York Med. Jour.*) has recently made a study of the test for syphilis first described by Justus in 1895, and later elaborated by him in 1897. Since that date the only confirmatory report that has been published is that of Cabot and Mertins in 1899.

The test depends on the asserted fact that a single inunction of mercury in all untreated cases of secondary, tertiary, and congenial forms of syphilis causes a reduction of from 10 to 20 per cent. in the hæmoglobin in about twenty-four hours. Justus states that the reduction follows intravenous and subcutaneous injections as well as inunctions, but that the administration of the drug by the mouth has no effect on the blood.

Justus obtained positive results in more than three hundred cases of syphilis. The test was negative in a large series of non-syphilitic cases. Cabot has in part confirmed the results obtained by Justus, although he obtained the reaction in two non-syphilitic patients—one, a case of tertian malaria, and the other a patient with chlorosis.

This test was obtained by Justus also in thirteen out of sixteen cases in which only a fresh chancre and inguinal adenitis were present. Both Justus and Cabot agree that so-called "latent" cases and cases which are subsiding either spontaneously or under treatment do not respond to the test.

During the last six months Jones has tried the test in fifty-three cases, thirty-five of which wereluetice, the other eighteen being controls.

The syphilitic cases were subdivided as follows: (1) Seventeen cases of active syphilis not under treatment; of these the test was positive in thirteen and negative in four. (2) One case of active syphilis not under treatment; this case did not respond

to the test. (3) Two latent cases; these were both negative. (4) Eight cases of chancre with adenitis; two of these were positive and four negative. (5) Seven cases of chancre without adenitis; in only one case was the test positive, the others being negative.

The control cases—which included five cases of phthisis, one of typhoid fever, one of apoplexy, one of fractured rib, one Colles' fracture, one of drug habit, one of chancroid, and seven of acute alcoholism—were also negative to the test.

In carrying out the test the hæmoglobin was estimated by Hammerschlag's specific gravity method and sometimes controlled by Von Fleischl's hæmometer. The night before the second hæmoglobin estimation was made forty to sixty grains of unguentum hydrargyri were rubbed thoroughly into the breast.

As a result of his experience Jones concludes that the test is of value in the recognition of doubtful cases of syphilis, although it is not infallible. Further, the test often fails in two classes of syphilitic cases in which a diagnosis is especially desired, viz., in latent cases and in early chancre, and sometimes at the beginning of the secondary stage. He thinks that the reaction is of about the same value in syphilis as the diazo reaction is in typhoid; that is, its presence in association with other suspicious symptoms is of great value, whereas its absence does not by any means indicate that the disease does not exist.—*Amer. Jour. Med. Sciences.*

Papillary Cystomata of the Ovary.

Uffenheimer (*Munchener med. Wochenschrift*) concludes a paper on this subject as follows: Papillary cysts develop from germinal epithelium by a primary outgrowth of the latter in the form of pouches, the first development being purely epithelial. It has not yet been proved that papillary cysts can develop from the epithelium lining follicles.

The sudden appearance of ciliated epithelium in these cysts is in consequence of a metaplasia, which is readily understood by reference to ordinary embryological facts. Papillary outgrowths may grow spontaneously in superficial cysts, or may break through their walls and extend to surrounding tissues. Normal ova may be found in follicles whose walls are partially destroyed. Psammomata are found in the early stages of papilloma, and hyaline degeneration of the vessels is present.—*Amer. Jour. Med. Sciences.*

A New Method of Cultivating the Tubercle Bacillus.

W. Hesse (*Zeitsche für Hygiene und Infektionskrankheiten*) has conducted experiments with plain agar-agar containing

"Nährstoff Heyden" in place of peptone. He has demonstrated a growth of the tubercle bacillus within a period of five to six hours. In cultures from tuberculous sputa the growth is sufficient for the demonstration of the tubercle bacilli in smears before the growth of other bacteria has masked the conditions. The growth in this short period is shown by the fact that the bacilli in smears from the culture have twice the dimensions of those in smears from the sputum.

He recommends the following technique: Pour 20 c.c. of the medium into a Petri dish, capacity 9.5 cm. in diameter. After coagulation invert the dish, keeping it in this position, in the subsequent manipulations. The sputum should be collected in a sterile glass dish. With a platinum-wire loop pick up a drop of the purulent mucus and rub it in a circle over the surface of the medium near the border of the dish. From this circle distribute twenty to thirty flakes of the mucus over the surface of the medium. Place the culture in the thermostat for twelve to twenty-four hours. Sterilize a cover-glass in the flame of a Bunsen burner and place it over the mouth of an open reagent bottle. Remove the cover of the Petri dish and bring one of the flakes of mucus in contact with the cover-glass. Remove the latter by introducing a platinum-wire loop under one edge, tipping the dish toward that edge. The cover-glass will then remain hanging by the opposite edge, and may be removed with forceps. If the flake of mucus does not attach itself to the cover-glass touch the latter with a hot platinum-wire loop at the point where it is in contact with the mucus, in order to melt the medium slightly. Cultures should be kept in a moist chamber.

He gives the composition of the medium as follows:

Nährstoff Heyden	5 grammes.
Salt	5 "
Glycerin	30 "
Agar-agar	10 "
Normal sol. hydrate sol.	5 c.c.
Distilled water	1000 c.c.

The "Nährstoff Heyden" should be dissolved in a little water. After the other ingredients have boiled for about two hours it should be added and the boiling continued fifteen minutes longer. Filter.

Hesse considers the method superior to the inoculation test in many cases.

If the method will enable one easily to find the tubercle bacillus in the "purulent mucus" of tuberculous sputa, in which no caseous masses are present, it will be of much practical value.—*Amer. Jour. Med. Sciences.*

An Experimental Study of Oxaluria, with Special Reference to Its Fermentative Origin.

From a series of experiments upon lower animals, and from a careful study of the subject, H. Baldwin (*Journal of Experimental Medicine*) has reached the following conclusions:

1. As various amounts of calcium oxalate may be held in solution in the urine, conclusions based upon the presence or number of calcium oxalate crystals found therein are of no real value as an indication of the quantity of oxalic acid present.

2. Unless the utmost care is exercised, the results obtained by quantitative estimation of oxalic acid are subject to large percentages of error. This is especially true in the use of Neubauer's or Schultsen's methods, in which the calcium oxalate is precipitated in an alkaline solution.

3. An ordinary mixed diet regularly contains traces of oxalic acid or its salts.

4. A portion of the oxalic acid ingested with the food may be absorbed and reappear unchanged in the urine.

5. The normal daily excretion of oxalic acid in the urine fluctuates with the amount taken in the food, and varies from a few milligrammes to two or three centigrammes, being usually below ten milligrammes.

6. In health no oxalic acid, or only a trace, is formed in the body, but that present in the urine has been ingested with the food.

7. In certain clinical disturbances which in some cases were associated with absence of free hydrochloric acid from the gastric juice, oxalic acid is formed in the organism.

8. This formation in the organism is connected with fermentative activity in the alimentary canal.

(a) The prolonged feeding of dogs with excessive quantities of glucose, together with meat, leads eventually to a state of oxaluria.

(b) This experimental oxaluria is associated with a mucous gastritis, and with absence of free hydrochloric acid in the gastric contents.

(c) The oxaluria and the accompanying gastritis are referable to fermentation induced by the excessive feeding with sugar.

(d) The experimental gastritis from fermentation is associated with the formation of oxalic acid in the gastric contents.

9. The symptoms attributed to an oxalic acid diathesis, with the exception of those due to local irritation in the genito-urinary tract, do not appear to be due to the presence in the system of soluble oxalates, but are more likely to depend on other products of fermentation and putrefaction.

An Inquiry into the Role of the Domestic Animals in the Causation of Typhoid Fever.

Wm. Royal Stokes (*Maryland Med. Jour.*, Nov., 1900.) reviews the literature with regard to the occurrence of typhoid in animals of natural or experimental origin. He comes to the conclusion that the lower animals are insusceptible. He further concludes from his own experiments as follows:

"In our experiment we have endeavored to produce infection through the natural route and by natural means by simply allowing the various animals to take in very large quantities of typhoid bacilli in their daily food. Although at least 500 colonies from the feces were carefully tested, we were not able to demonstrate the presence of any typhoid bacilli in two chickens, two white rats, two rabbits, two guinea-pigs, one calf, and two pigs. Although we have not employed a large number of animals, we feel justified in expressing the opinion that the typhoid bacillus cannot, as a rule, maintain its struggle for existence in the intestines of the domestic animals. We therefore conclude that the dejecta of animals play no considerable part in the distribution of typhoid fever."

Results Obtained by Anti-Typhoid Inoculations in the Be-leaguered Garrison in Ladysmith. (*Gazette des Hopitaux*, July 27th, 1900.)

Men inoculated, 1705; typhoid cases, 35 (1 in 48.7); deaths, 8 (1 in 213). Men not inoculated, 10,529; typhoid cases, 1,489 (1 in 7.07); deaths, 329 (1 in 32). Officers inoculated, 44; typhoid cases, 9 (1 in 5); deaths, 2 (1 in 22). The difference in the results with officers and men, the writer thinks, may be due to inoculation of some of the former with anti-typhoid serum, and not with the vaccine consisting of a sterilized typhoid culture. The date and place of inoculation of five officers in the number attacked by fever are set down as unknown.—*St. Louis Medical Review*.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES F. W. ROSS, ALBERT A. MACDONALD,
H. C. SCADDING AND K. C. McILWRAITH.

Observations on the Obstetric Surgery of Pelvic Contraction.—

By DR. CHARLES JEWETT.

The opinion seems to be that pelvic contraction is very rare in this country. The author believes, however, that the frequency of this anomaly does not differ materially from that in the old world. It is present in from ten to fifteen per cent. of all parturients. There is urgent need of more systematic pelvimetry in our hospitals and in general practice. The minutiae of pelvimetry are considered. Among the more useful indications of pelvic contraction at labor are the following: (1) Failure of the head to engage during active labor. (2) Failure to engage the head by well-directed suprapubic pressure. This is a diagnostic point which may often be employed to advantage in the few weeks immediately preceding labor. (3) Failure of tentative traction with forceps. In partial engagement of the head, the latter should always be tried with the aid of the Walcher posture before resort to cutting operations. The methods of delivery in pelvic contractions, are (1) spontaneous delivery; (2) craniotomy; (3) the induction of premature labor; (4) symphysiotomy; (5) Cæsarean section. Each of these subjects is discussed in the article, and the usual text-book comments are made thereon.—*Brooklyn Med. Jour.*

Extra-uterine Pregnancy After the Fifth Month.

F. Jayle has observed in twenty-nine cases of tubal or intra-ligamentous pregnancy that the danger of serious complications diminishes after the first months of ectopic pregnancy. The death of the fetus at the ninth month is seldom followed by accidents. On the contrary, the patients who were not operated on at once, seemed to benefit by the delay, allowing time for retrogression of the placental circulation after the death of the fetus. In one of the instances mentioned in his article in the *Revue de Gyn.* for January-February, the pregnancy occurred in the middle portion of the tube, simulating the position of a normal pregnancy. In another case the nine-months' fetus had been dead six months before operation, but the extensive adhesions proved no obstacle to the total extirpation of the sac.—*Jour. A. M. A.*

The Treatment of Placenta Previa by Cæsarean Section, with Report of a Successful Case.—By DR. FRANCIS D. DONOGHUE.

It would seem, if the author's deductions are correct, that section, in preference to other operative interven-

tion, is indicated in: (1) cases of complete previa; (2) cases of previa in primiparæ when signs of fetal or maternal exhaustion are evident; (3) when the condition of rigid os is present; (4) where there is a history of previous operative delivery; (5) in transverse positions and in cases of prolapsed cord, if the cord is not easily returnable. It is the easiest of celiotomies, and it is also an extremely safe operation, not only for the mother, but for the child. The author's case is given in detail.—*Boston Med. and Surg. Jour.*

Painful Menstruation.

R.	Acetanilidi	gr. iii	18
	Caffeinæ citratæ	gr. ss	03
	Sodii bicarb	gr. iii	18

M. Sig. At one dose. To be repeated in one hour if necessary.

Puerperal Diphtheria due to Löffler's Bacillus.

Dr. Andréodias (*Gaz. Hebdom. des Sciences Méd. de Bordeaux*, Sept. 9, p. 422). The production of vulvar or vulvovaginal membranes after confinement was supposed to be due to the streptococcus alone or associated with putrefactive germs, but recent observations show the possibility of puerperal diphtheria due to Löffler's bacillus. The writer cites eleven published observations in all of which the diphtheria bacillus was found. Diagnosis cannot be made clinically. Bumm has drawn special attention to the very bright, white color of the membranes, the extension over the whole surface of the genital tract, the complete absence of inflammation of the uterus or peri-uterine cellular tissue, the absence of consecutive ulceration and consequently of cicatrices.

The mortality in puerperal diphtheria is about 9 per cent., which is small compared to the average mortality in faucial or laryngeal diphtheria, either in adults or children. If the clinical signs in a suspected case are those of puerperal diphtheria, injections of antitoxin ought to be commenced without delay, even in the absence of a bacteriological report. Vaginal douches of perchloride of mercury ought also to be used.—*Med. Review.*

For Delayed Uterine Involution.

The *Clinical Review* for December says that a combination of ergotin, hydrastinine and strychnine, in such proportions as indicated by the case, is of marked value in tardy uterine involution following labor. The drugs are well taken in tablet form.—*N. Y. Med. Jour.*

Normal Saline Transfusion in Puerperal Hemorrhage.

Maygrier (Thirteenth International Medical Congress, Paris, in *Munch Med. Woch.*, Oct. 2, 1900) states that by means of intravenous injections of normal saline solution, about fifty per cent. of those women who, by reason of incoercible postpartum hemorrhage, are threatened with impending dissolution may be saved. He reports seven successful cases out of a total of fifteen occurring in his own practice. These injections are efficient only when given in massive doses—one to two quarts of a 1:1000 solution—but should be restricted to cases in which intracellular injection has proved insufficient, or when the patient's condition becomes precarious, or again, in cases which prove very serious from the start; and should be repeated if beneficial results fail to materialize and collapse reappears. In this manner several quarts of the solution may be injected in twenty-four hours. With the usual precautions and customary technique, these injections are innocuous, and Maygrier concludes that no woman should be left to succumb to puerperal hemorrhage without an attempt at saving her life by this heroic plan of treatment.—*Med. Age.*

Transverse Positions and Turning in Primiparae.

G. Vogel (*Munch Med. Woch.*, Oct. 9, 1900, p. 141) says that transverse positions of the fetus are very rarely met with in primiparae. Among the causes are numbered tumors, placenta previa, uterus bicornis, and scanty amniotic liquid. Among eighty-six cases of transverse position occurring at the Wurzburg clinic, eight presented in primiparae. Five of the women were affected with uterus arcuatus, one with placenta previa, and six with a flattened pelvis. As regards treatment, Vogel recommends early cephalic version by external manœuvres, and if unsuccessful combined cephalic version with perforation of the membranes. As a last resort, he advises podalic version, and only in extreme cases podalic version with the hand *in utero*, provided there be no impending rupture of the uterus.—*Med. Age.*

Ophthalmia Neonatorum.

Dr. John E. Weekes has an article in the November number of the *American Gynecological and Obstetrical Journal*. The treatment recommended is as follows: (a) Prophylactic. Dropping one drop of a 2 per cent. solution of silver nitrate in each eye immediately after birth. (b) Actual.

1. Frequent flushing with a 3 per cent. boric acid solution, taking care not to press the eye-ball, or abrade the cornea.
2. Pieces of linen laid on a cake of ice and then on the eye, to be changed as soon as they become warm. This treatment

to be carried out from one to four hours at a time three times a day. The object is to bring the local temperature to a point unfavorable to the growth of the gonococcus. It should be discontinued when the swelling in the lids subsides.

3. Antiseptics, applied once daily. Silver nitrate, $\frac{1}{2}$ to 2 per cent.; hydrarg. bichlor., 1-5000; protargol, 20-40 per cent.; formalin, 1-3000. The author's preference is for a 1 per cent. solution of nitrate of silver applied to the whole surface of the conjunctivæ once a day.

4. Constitutional treatment to improve the general health of the child.

K. C. M.

Bacillus Aerogenes Capsulatus in Puerperal Infections.

This subject is taken up by Welch in a paper on morbid conditions caused by bacillus aërogenes capsulatus, which appears in the September number of the Bulletin of the Johns Hopkins Hospital. The puerperal conditions due to this germ are:

1. Emphysema of the fetus dead in utero. The infection generally takes place after rupture of the membranes.

2. Puerperal endometritis, in which it is usually associated with other germs.

3. Physometra and emphysema of the uterine wall, the latter being much the more serious condition. In eleven cases of the latter affection, all were fatal.

4. Puerperal gas-sepsis. Gas bubbles found at an early autopsy in the heart and vessels, etc.

The author considers that most of the cases reported as deaths due to the entrance of air into the uterine veins really belong to this kind of infection.

We should conclude from the author's remarks that this bacillus causes an extremely fatal infection when it gains entrance to the tissues, but that it is not specially dangerous to the mother otherwise.

K. C. M.

Rupture of the Uterus.

In the November number of *Obstetrics*, Dr. H. Schmidt gives a report of nineteen cases of this accident from Schonta's Clinic at Vienna, nine of which were incomplete, and ten complete. The measures used in treatment were:

1. Drainage. The means of light packing of uterus and vagina with iodoform gauze. In complete cases the gauze was passed through the rent into the peritoneal cavity. The strips of gauze were removed one by one during the eight days following their introduction. Ice-bags over the pubis and analeptics were used during the puerperium.

2. Operation, consisting of laparotomy with supra-vaginal amputation, or Porro's operation and vaginal extirpation. The

results were as follows: (a) Incomplete ruptures, nine cases; seven treated by drainage; two deaths; one case died of hemorrhage while preparations were being made for laparotomy, and one of septicemia under expectant treatment. (b) Complete rupture, ten cases; the death rate was 50 per cent., being the same in the operative as in the non-operative cases.

The doctor then quotes 160 additional cases from literature, the results of which lead him to the conclusion that "except in those cases in which severe hemorrhage or extensive lacerations make operation imperative, better results will be obtained by conservative treatment. In other words, we should content ourselves with drainage, and limit operative procedures as far as circumstances will permit." This conclusion is in agreement with the treatment recommended at the Rotunda Hospital also.

In view of the increased favor with which Cesarean section is now regarded, it is interesting to note that one of his cases of complete rupture was due to the spontaneous giving way of the scar of a previous Cesarean section.

K. C. M.

Anesthesia in Obstetrics by Means of Cocainization of the Spinal Canal.

This subject has given rise to much discussion in medical societies and many articles in magazines lately. The *New York Med. Jour.*, for October 27th, and November 3rd, e.g., contains two editorials, and three reported cases. The case at present may be summed up thus:

1. At the International Congress of Medicine, in Paris, last summer, deaths are said to have been reported from the use of this method.
2. Many failures are recorded, one gentleman recording as many as seven failures in twenty-five cases.
3. The after-effects, such as severe headache, vomiting, etc., are frequent and prolonged.
4. The anesthesia produced is of uncertain duration.
5. In contrast to the above, some experiments have had excellent results.

In view of the above facts we do not, as yet, feel justified in resorting to this method.

K. C. M.

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF J. PRICE-BROWN.

Sarcoma of Right Nasal Fossa, with Acute Sinusitis and Orbital Cellulitis.

P. G. Goldsmith (*Montreal Medical Journal*, October, 1900). Report of a case of sarcoma affecting right nasal fossa, and attending to autrum and right eye. Operative treatment only gave temporary relief. Microscopical examination proved it to be of the small round-celled variety.

Double Harelip, with Complete Cleft Palate.

W. G. Anglin (*Kingston Medical Quarterly*, July, 1900). The patient, male, aged 15, had complete double harelip, with flattening of alæ-nasi, protrusion of os incisivum, with attached central incisors, and complete cleft of hard and soft palate extending through the uvula.

The first operation consisted in removing the protruded bone and suturing the palate. After freeing the labial levering with a scalpel, the os incisivum was separated from the vomer by bone forceps, bleeding being checked by thermo-cautery. To close the cleft in the palate, the margins were first pared throughout. Then the two sides of the soft palate, including the uvula, were united by horsehair sutures. For the closure of the hard palate, Langerebeck's method was adopted, lateral incisions being made on each side parallel to the cleft extending down to the bone. Then a periosteum elevator was introduced, and mucoperiosteal flaps raised clear through to the cleft. Interrupted silk sutures were inserted to retain the flaps in position. The result was fairly good, anteriorly and posteriorly, firm union being obtained, a small oval opening in the centre of half inch by quarter only being left.

The second operation was done a fortnight later. The central labial portion was pared laterally, making it V shaped. The lateral margins were next separated from the bones and freshened. The sutures used were silver-wire, silkworm-gut and horsehair. Primary union was obtained. Articulation became much more distinct. Very satisfactory photographs, before and after, were given.

Hemiatrophy of the Tongue.

L. A. Parry (*Lancet*, February, 1900), gives the history of a case occurring in a man aged fifty years. He had no other trouble, simply atrophy of one side. The only point in his personal history bearing on the case, was that some years

previously he had fracture of the base of the skull. As there were no symptoms of paralysis in any other parts of the body, nor of the presence of tumors, meningitis, caries, etc., the hemiatrophy was supposed to be due to injury of the nerve in its passage through the anterior condyloid foramen at the time of the fracture of the base of the skull.

Retropharyngeal Abscess.

Traver (*Revue Hebdom. de Laryngol d' Otol. et de Rhinol.*, June, 1900), relates the history of a case occurring in an infant. At the age of seven months the glands of the neck suppurated and were incised. A large quantity of pus was discharged. Hysphagia and dyspnea soon followed, which gradually increased. Traver saw the child when it was eleven months old. It was pale and wasted, with head fixed and retracted. Respiration was stutorous and the glands of neck enlarged. A large tumor almost filled the pharyngo-buccal cavity. It was elastic and slightly fluctuant. The abscess was opened in the middle line at its most prominent part, and the child's head bent quickly forward. Still the gush of pus was so profuse that some entered the larynx and trachea, threatening asphyxiation. Rhythmical traction of the tongue, artificial respiration and heart stimulation were kept up for some time. The child made a good recovery.

Treatment of Toxic Paralysis of the Larynx.

Watson Williams (*Jour. Lar. Rhin. and Otol.*, October, 1900), after dealing fully with the pathology and treatment of these cases, sums up the latter under three heads.

1. The resort to appropriate general treatment of the infective disease, when that is the cause of paralysis; and measures directed to the removal of the poison in the circulation and tissues, in the case of organic or metallic poisons.

2. Intralaryngeal applications of the faradic or galvanic current, combined with the internal exhibition of strychnine in considerable doses, either by the mouth, or, when feasible, directly into the affected muscles.

3. The relief of dyspnea and threatened asphyxia, in cases of bilateral abductor paralysis, by intrabation and tracheotomy—measures which have frequently been necessary in diphtheritic and typhoid laryngeal paralysis.

A Plea for Early Naked-Eye Diagnosis and Removal of the Entire Organ, with the Neighboring Area of Possible Lymphatic Inspection, in Cancer of the Larynx.

J. Noland Mackenzie (*Jour. Lar. Rhin. and Otol.*, October 1900), deals in a graceful and exhaustive manner with this

subject. He believes that up to the present time, the true importance of the views he advocates have not been realized. There are three methods of diagnosis in laryngeal cancer.

1. The naked-eye method, or diagnosis by direct inspection, supplemented by clinical phenomena.

2. Thyrotomy.

3. The microscope.

Notwithstanding the prevailing fashion of submitting every case of suspected laryngeal cancer to removal of a position of the growth for microscopical examination, Mackenzie relegates this plan completely into the background. He says, on the other hand, that it is impossible to exaggerate the importance of naked-eye diagnosis; and that taken all in all it is by far the most practical of the three methods.

"Every resource and refinement of clinical diagnosis should be resorted to before an appeal to the microscope is made."

Mackenzie even goes further. He continues: "But suppose after weighing carefully all the facts of the case in our possession, a reasonable doubt remains as to the diagnosis, shall the next step be the removal of a portion of the diseased structure for examination?"

"In the face of all authority to the contrary, I say emphatically, 'No.' Before even considering such a proposition, the suspected growth should be examined from every point of view. This is best accomplished by the second method, thyrotomy; or, if necessary, even more extensive external division of the tissue of the neck." And only as a very last resort, does he consider the extirpation of the tumor admissible for the purpose of microscopic diagnosis.

The objections to the removal of a portion of the tissue are the following:

1. It subjects the patient at once to the dangers of the auto-infection at the point of incision and to metastasis elsewhere.

2. It stimulates the local growth of the cancer.

3. The method is often inconclusive, misleading, and sometimes practically impossible.

The first of these he considers of great and permanent importance, and in looking over the past he is appalled at the amount of mal-treatment which this cancerous larynx has heretofore received.

His conclusion is, that having once established the existence of cancer in the larynx, the use of the knife is the only means of cure. In a vast majority of cases, the whole larynx should be removed and with it all the tributary lymphatics and glands. Even when the cancer is small, and only one side is affected, he doubts the advisability of removing only one half of the larynx. It would be safer to remove the whole.

On the vexed question: "Shall the larynxologist call in the assistance of the general surgeon in operable cases of this kind?" Mackenzie utters no uncertain sound. His answer is: "We special workers in the field of laryngology must cast aside our pride, and recognize the fact that, while our achievements may be brilliant in the domain of endo-laryngeal surgery, when it becomes a question of extirpation of larynx and lymphatics, we must seek the aid and counsel of the general surgeon. We must work together, the one dependent on the other."

Ingestion of Hydrochloric Acid, Pharyngo-esophageal Eschar.

Le Gendre (*La Presse Med.*, June, 1900,) gives the history of the case of a young woman, who was brought to the hospital on account of hematemesis, apparently due to simple ulcer of the stomach. In a few days, diphtheritic patches were noted in the pharynx, from which a short bacillus diphtheriæ was cultivated. Subsequently false membrane was coughed up. A diagnosis of gastric ulcer and co-existing diphtheria was made. A fortnight later it was discovered that all the lesions were due to hydrochloric acid, which the patient had swallowed in an attempt to commit suicide.

A Case of Esophagotomy; the After-Treatment.

W. A. Mackay (*Lancet*, August, 1900). The mortality after esophagotomy has been estimated at 23 per cent. One of the most frequent causes of death is septicemia following sloughing of the edges of the wound. A difficult question to determine is whether to close the esophageal wound or leave it open. Jacobson says, "that sutures should only be used when the wound in the gullet is clean cut, not bruised, and when the body has been quickly removed. Usually nutrient enemata are administered, or food given by a soft-feeding tube."

In the author's case, a piece of bone had been lodged in the esophagus for six weeks. It was located just below the cricoid. The usual operation was performed on the left side, taking the cricoid cartilage as a guide, the aim being to expose its left lateral aspect. The skin incision was carried well on to the sternum, the platysma divided, and the omohyoid cut across. The inferior thyroid artery was ligatured and divided, and the posterior part of the left lateral aspect of the cricoid exposed. On the ivory knob of a probang, passed through the mouth, the esophagus was carefully opened. The left index finger was then inserted into the opening, and with a dressing forceps, passed along the finger, the bone was gently extracted. It presented three sharp points and proved to be part of the rib of a goat. It measured $1\frac{1}{2}$ inches in its longest axis and smelt most

fouly. The wall of the esophagus was infiltrated with pus, and was shedding small sloughs. After cleansing, the omohyoid was sutured, and the rest of the wound was brought together round a straight wide glass tube, which reached to the opening in the esophagus which was not sutured. The patient left the hospital one month later with the wound healed.

The patient found that if he sipped milk or chicken-soup carefully in teaspoonfuls, very little would come through the wound, so he was allowed to take his nourishment in this way. The glass tube was taken out after taking food, the parts dressed, and then the tube replaced in position dry, as long as its presence was required.

MEDICAL ITEMS.

It is stated that India has about half a million lepers.

Dr. Nicholas Senn has made a gift of \$50,000 to Rush Medical College.

By the will of the late Dr. Hunter McGuire, an estate of over \$150,000 is devised to his wife.

The trustees of Cornell University are building a new Medical College at a cost of \$125,000.

QUEEN'S MEDICAL BUILDING.—Queen's Medical College Kingston, is not large enough. The Senate are finding a remedy by adding one storey, thus making it a three-storey building.

The third Pan-American Medical Congress was held at Havana, Feb. 4th-8th, inclusive. We understand that Dr. James F. W. Ross, of Toronto, and Dr. F. J. Shepherd, of Montreal, were present.

The graduates of the Woman's Medical College, Toronto, resident in the city, are anxious to have a special hospital built which will be under their control. We understand the Women of Canada will be asked to contribute 25c each towards the building of such an institution.

Plans for the new Jefferson Hospital, which will be erected at Tenth and Sampson Streets, Philadelphia, are now under consideration by the architect and trustees. When the building is completed it will be one of the most convenient and perfect structures of the kind ever built.

Fifty thousand dollars has been given to the College of Physicians and Surgeons of Chicago for endowment purposes by two Chicago physicians, who are members of the faculty. Dr. William E. Quine, dean of the school, gives \$25,000 to endow the college library, and Dr. D. A. K. Steele gives \$25,000 to endow the pathological laboratory.

Editorials.

QUEEN VICTORIA.

We in Canada loved Queen Victoria with a love that passed description. While we mourn for the loss of a grand sovereign, and a good woman, we are exceedingly grateful for the very kindly tributes to her memory which have come from foreign sources. Our neighbors south of us, through their press, have shown her memory as much respect as if she were their ruler, instead of being the Queen of Great Britain and the Empress of India. Friendly comments are to be found in the medical as well as lay press.

The New York *Medical Journal* speaks as follows: "There is probably no person in the world whose fatal illness could have caused the widespread sorrow and sympathetic reverence and respect occasioned by that of Queen Victoria. . . . But the efforts of those who were privileged to minister to her—privileged, not because she was a queen, but because, being a queen, she had been all that she was in every capacity of life—have been followed closely with the warmest prayers of the world at large in their support, and with its tenderest sympathies. For this reason the names of Sir Thomas Barlow, Sir Douglas Powell, and Sir James Reid will be preserved in history irrespective of their services to medical science in general, as those who cared in her last moments for the most universally beloved monarch that ever sat upon a throne. The medical profession in all countries will ever cherish the memory of a sovereign who constantly interested herself in the relief of suffering, who held medicine in high esteem, and who was the first British monarch to publicly recognize the importance of medical science by conferring a patent of nobility on a medical man."

We had not intended to mention the British press, but cannot refrain from quoting the London *Star*, a pronounced Radical journal. The *Star* quotes Wordsworth's lines, "A perfect woman, nobly planned," etc., and then goes on to say: "That was our Queen. Ah, how loving was the love with which we

loved her! How proud our pride! How we, her sons and daughters, all over the world, exulted in her as the most priceless possession of our race. How we wore her spotless name as a jewel on the forehead of our empire! How we trusted her! How we acclaimed her, with filial cries, when she came among us, with her simple, motherly smile, and her good grey head, bowing benedictions on the people that were her children! It is hard to think that she will never see us, that we shall never see her more. The thought of all she has been sends an ache through our hearts, and fills our eyes with tears, for too well we know that we shall never look upon her like again."

TOBACCO FOR THE SOLDIER.

Tobacco has generally been considered in the past, even by its fondest friends, as simply a luxury. It has generally been considered a nuisance by the non-smoking part of the community. We heard, however, a different story during the Spanish-American war, when newspaper correspondents freely stated that tobacco had become a necessity, for soldiers at least, and that in consequence it should be included in their regular rations. These statements, however, were, as a rule, not considered worthy of a second thought.

Experience in the South African war brings the subject again to the fore. So great an authority as the *Lancet* expresses views similar to those of the American correspondents already referred to. It states that we have learned through this war many things of greater or of less importance, not the least among them being the fact that tobacco plays a very important part in the soldier's existence. The *Lancet* goes on to say: "Whether this is to be reckoned as a great fact or a small one, there can be no doubt about the truth of it. Yet the Duke of Wellington's armies had no tobacco worth speaking of. If they did not forbid its use, at any rate the Iron Duke's officers were directed to advise their men strongly against it. What a curious contrast with the campaigning in South Africa, where marches and privations as long and as stern as any suffered by our great-grandfathers were borne by the volunteers and soldiers of to-day with a grumble only when their 'smokes'

failed them. We have it from many who took part in the forced marches leading to Paardeberg, to Bloemfontein, to Pretoria, and beyond, that when rations were but two or three biscuits a day, the only real physical content of each twenty-four hours came with the pipe smoked by the smouldering embers of a camp-fire. This pipe eased the way to sleep that might otherwise have lingered, delayed by the sheer bodily fatigue and mental restlessness caused by prolonged and monotonous exertion. It is difficult, then, to believe that tobacco is anything but a real help to men who are suffering long labors and receiving little food, and probably the way in which it helps is by quieting cerebration—for no one doubts its sedative qualities—and thus allowing more easily sleep which is so all-important when semi-starvation has to be endured.

“The cases of acute mental derangement in the course of campaigns, such as the present, are many. There have indeed been many in South Africa. It would be most profitable and interesting could medical officers have taken special note of the capacity for sleep previously evidenced by those who broke down, and also of their indulgence or non-indulgence in tobacco. We are inclined to believe that, used with due moderation, tobacco is of value second only to food itself when long privations and exertions are to be endured. Two features are to be noted with regard to the smoking practised on active service. It is almost entirely in the open air, and it is largely on an empty stomach. The former is always an advantage; the latter we generally reckon a most unfavorable condition. Shall we see in the near future patients with tobacco amblyopia or smoker's heart acquired while the trusting friend of tobacco thought that he was enjoying unharmed the well-earned solace of a hard day's march? We believe not, and that the open air will have saved what might have been the untoward results of smoking when unfed.”

PHILADELPHIA MEDICAL JOURNAL

About three years ago there appeared a new medical journal, which was to be in all respects a paragon of perfection. It was somewhat loudly proclaimed that it was to be “A journal for

the profession, of the profession, and by the profession." The majority of the proprietors of the *Philadelphia Medical Journal* were physicians who did not intend to be under the control of "money-grabbing publishers." Dr. George M. Gould, who had for many years before that time been editor of the *Medical News*, was made editor by the trustees. In fact, it was generally supposed that the new journal was created largely, if not entirely, for the purpose of giving Dr. Gould an opportunity of showing how a high-class medical journal should be conducted.

Rumor has said lately that the new journal was not a success from a financial point of view. But this was not a matter of surprise to business men who know something about the cost of conducting medical journals. The real surprise came, however, a few weeks ago, when it was announced that Dr. Gould had been discharged from the editorship. We learn from the *Medical Record*: "The following editorial was written by him for his issue of the journal, December 29th, but was suppressed by some one who had more control over the editorial columns than the editor himself." The portion of the editorial, which we quote, was published by the *Record* at Dr. Gould's request:

"A Personal Word from the Editor.—Just as the last forms are going to press, I learn that the present number of the *Philadelphia Medical Journal* will be the last (except as to the Original Article Department of the next issue) for which I shall have editorial responsibility. I am unable to set forth the reasons why the board of trustees no longer wish my services as editor. I am in complete ignorance what such reasons may be. I have heard of no criticism upon their part of my conduct of the journal, and my communication, handed to the board in session on December 8th, expressing my desire to be retained as editor, has not been answered.

"To the thousands of friends, to all subscribers, who may read these lines, I can only here express my most profound regret at the sudden separation. In the endeavor to aid in establishing a great independent medical journal, utterly free from publishers' influences, from commercial bias, and from what is, if possible, still worse, an unprofessional spirit within the profession, I have given my labor and my life, all too freely. What mistakes I may have made, I trust may be excused in the belief that they were due to a sincere desire to devote every

line of the reading columns to the cause of professional truth and honor."

We know nothing about the other side of the case, and cannot therefore say anything as to the reasons which influenced the trustees in their course. We are sorry that a man like Dr. Gould should be subjected to such treatment. He certainly has great ability and a proper conception of respectable medical journalism; but we fear that he has certain peculiarities or idiosyncrasies of disposition and temper which make it somewhat difficult for any aggregation of ordinary mortals to live comfortably in the same house with him.

THE SOUTH AFRICAN HOSPITALS COMMISSION.

We have, on more than one occasion, referred to the committee appointed by the British Parliament to enquire into the treatment of the sick and wounded in South Africa. The chairman of this committee was Lord Justice Romer, and associated with him were two laymen, and two representatives of the profession. The commission was called into existence on account of the "sensational and hysterical statements" of Mr. Burdette-Coutts.

It is generally admitted that the sick and wounded were not always properly cared for, but, at the same time, it is generally denied that they were wilfully neglected. The difficulties of the situation were sometimes remarkable. Surgeon-General Hamilton referred to some of these at the last meeting of the British Medical Association. He said, "they must all remember that their troops, unfortunately, were bottled up on the river at Paardeberg, drinking literally diluted—he might almost say essence of—Boer and mule." The water which the soldiers drank for some time at that place was practically putrid. One of the witnesses stated before the commission that in one hospital, where there were five hundred beds, they had to care for eighteen hundred sick. One of the witnesses was Dr. Ryerson, of Toronto, who very emphatically denied the charges of neglect and inefficiency made by Mr. Burdette-Coutts.

The Royal Commission, after a very careful investigation, has recently issued its report, the tenor of which is that, review-

ing the campaign as a whole, it cannot properly be said that the medical or hospital arrangements broke down. It adds that there has been nothing in the nature of a scandal in regard to the care of the sick and wounded, and no general widespread neglect. All the witnesses of experience in other wars were practically unanimous in declaring that, taking it all-in-all, the sick and wounded were never so well cared for in any other campaign.

The commission did not pretend that the medical service was in all respects satisfactory. It was found that the army medical corps was not in a good state of preparation for a heavy campaign. In certain cases, a few of the orderlies in the field hospitals were found to be guilty of serious offences, especially in pilfering stimulants from the medical supplies. It is a great satisfaction for us to learn from the inquiry that the conduct of the medical officers, taken all-in-all, and especially considering the very serious difficulties they sometimes had to contend with, was simply magnificent.

DIAGNOSIS OF CANCER OF THE STOMACH.

Those who have been in practice for a number of years will readily assent to the statement that it is, by no means, an easy task to make a diagnosis of cancer of the stomach in every instance. Indeed, in many it is very difficult, and in not a few instances almost, if not quite, impossible. The writings of Brinton, Habershon, Wilson Fox, Ewald, Hemmeter, Martin, Fenwick, Welch, Osler and others, make it abundantly clear that the stomach is one of the most reluctant organs in the body to yield up its pathological secrets. We shall endeavor to state in concise form some of the signs and symptoms of gastric cancer.

The disease has usually a gradual onset. This, however, is not always the case. In perhaps about 20 per cent. of all cases the disease seems to come on suddenly, the cause being usually some indiscretion in food or drink. The disease may have been already in existence and only brought into notice by such circumstances; or, these causes set up some inflammatory condition that ended in cancer.

There is some difference of opinion in the writings of those who have studied the subject, regarding the frequency with which pain is present at some time; yet it might be laid down as about the truth to say that there is pain in at least 90 per cent. of all cases of cancer of the stomach. It is a remarkable fact that a small percentage of cases has no pain whatever. As a symptom, therefore, the presence of pain is of some importance. The pain is generally referred to the stomach region, in some cases, to the lower portion of the abdomen, while in a few it radiates through to the back. The pain may vary from slight and occasional in character to that of being constant and severe.

Another symptom of frequent occurrence is vomiting. To some extent this is met with in nearly 90 per cent. It is very well marked, frequent and severe in 50 per cent. of the cases. Usually it does not make its appearance so early in the disease as pain. In cases where there is considerable dilatation, the patients experience generally a good deal of relief from the vomiting. Undigested foods may lie in the stomach for days. Sometimes the vomiting is shortly after taking food, at other times it is at intervals of days, when the contents of the stomach have become very foul. Vomiting is least pronounced when the disease is on the stomach walls. The vomiting of blood is noticed in about 30 per cent. of all cases.

Dyspeptic symptoms, such as discomfort, belchings, fulness and weight, due to fermentation, catarrh, ulceration and dilatation, are always present when there are stomach symptoms. The appetite may remain good—it is sometimes increased—but the distress after eating restrains the person from indulging freely in food. Anorexia and indigestion are met with in fully 50 per cent. of the cases in their early stages, and in an increasing number up to 100 per cent. in later stages of the disease.

Loss of weight and strength are almost constant symptoms. In a few cases the strength is maintained to an advanced stage of the disease. In active cases, the loss of weight and strength are of early appearance and progressive in character. Even in the more latent cases there is loss of weight and strength, and finally the patients are compelled to abandon all work.

Fever is noted in about 60 per cent. of all. Some authors

give as high a percentage as 75, while others a much lower one. Taken in a large number of cases, the figure just given will be found practically correct. In many cases it is low in range, only a few points above normal, or 99° or 100° F. In a few cases it runs to 103° or 104° with chills and hectic symptoms. In these cases there are usually adhesions and pockets of pus, or abscesses in the liver. There will be about 40 per cent. of the cases with a normal or subnormal temperature.

Constipation is present in about 70 per cent. of the cases.

Of the physical signs the following may be noted as of importance in enabling one to make a diagnosis:

Much has been said upon the subject of free hydrochloric acid in the stomach. It is absent in over 90 per cent. of stomach cancer cases, and it may be said that free hydrochloric acid is only found in those cases of cancer that have arisen from gastric ulcer. In atrophic gastritis and achylia gastrica free hydrochloric acid is wanting; but there are other conditions present in such cases, and the usual signs and symptoms of cancer are absent, so that a diagnosis can generally be made. The absence of free hydrochloric acid is, therefore, a sign of much value.

With regard to lactic acid it may be said that it is present in about 80 per cent. of cancer cases. Its presence argues strongly in favor of the stomach trouble being cancerous, but its absence is of comparatively little value as evidence that cancer is not present.

Enlarged supraclavicular and axillary glands and metastasis to the umbilicus have been noted in a certain number of cases. The tissues of the umbilicus or linea alba become indurated and adherent to the integument.

To all the above, the stomach tube often brings up fragments of tissue that, under the microscope, reveals the true nature of the case.

Careful search should be made for any tumor that may be present. The entire area of the stomach must be examined by inspection, palpation and percussion, and an anesthetic may be required. It must be borne in mind that, as a rule, the existence of tumor cannot be discovered early in the disease, so that diagnosis by the presence of a tumor is usually a late diagnosis. In at least 20 per cent. of cases with tumor, it is not discovered during the lifetime of the patient.

CHICAGO DRAINAGE CANAL.

A year ago we described this gigantic piece of sanitation and announced its completion. The Chicago river had been made to flow back—to reverse its sluggish course—and the sewage of Chicago with a goodly admixture of Lake Michigan had been sent off towards the Gulf of Mexico, instead of slowly, very slowly, oozing in our direction.

We then pointed out that there were many conflicting interests—commercial and political as well as sanitary.

Some of these are looming up portentously, as witness the following press despatches :

“ Washington, Jan. 28.—The United States Supreme Court to-day rendered an opinion in the case of the Chicago drainage canal. The proceedings was brought by the State of Missouri against the State of Illinois and the drainage board, the end sought being to prevent the use of the canal because of its supposed pollution of the drinking water of St. Louis. The effect of the decision is to sustain the contention of the State of Missouri.”

“ Chicago, Jan. 28.—President Alexander J. Jones, of the sanitary district, said : ‘The decision is somewhat of a surprise to us, but, after all, it simply means that the case must now be tried on its merits. The sanitary district of Chicago has expended \$34,000,000 in the abiding faith that flowing water purifies by the principle of oxidization, and to prove this is to dispute what we contend is an acknowledged scientific fact, at least acknowledged by all scientists the world over, except those of St. Louis. The district will stand or fall by this principle, and we are prepared to face the issues in the United States courts of equity, which are now opened to the complaints of the citizens of St. Louis and the State of Missouri.’ ”

We may expect a pretty prolonged contest, and the collection of many experiments and analysis and theories; and we trust that the cause of science will be thereby advanced. With this hope in view we indulge the further one that experts will endeavor really to deal with the subject “on its merits,” as expressed above, and not be biased by “belonging” to one side or the other. Of course we know, and should in justice say, that men are apt to be chosen by one side or the other because their views are favorable to that side, but we ought to be careful, all the more careful, to see that the converse does not warp us.

W. O.

Obituary.

ALEXANDER CAMPBELL REID, M.B.

Dr. Reid, of Hamilton, died January 18th, aged 63. He graduated in the University of Aberdeen, 1865, and commenced practice in Hamilton in 1867. The deceased, who was unmarried, retired from active practice about five years ago.

JAMES H. KENNEDY, M.D.

Dr. Kennedy, at one time a practitioner of Guelph, died in Michipicoten, January 30th, after a short illness. He received his medical education at McGill and graduated M.D. in 1888.

MALCOLM RANNEY, M.D., M.R.C.S., ENG.

Dr. Malcolm Ranney died at his residence, Georgetown, February 1st, aged 69. He was educated in Scotland, and graduated M.D., University of Glasgow, in 1855. He was a resident of Georgetown for about thirty years, but was not recently engaged in active practice.

ISAAC RYALL, M.B.

Dr. Ryall, Medical Health Officer of Hamilton, died at his residence, January 21st, aged 70. He had lived in Hamilton over half a century, and was at one time one of the most active practitioners of that city. He was surgeon of the Thirteenth Battalion in the time of the Fenian Raid, in 1866, and retired some years ago, with the rank of surgeon-major.

CHARLES WESLEY PURDY, M.D., LL.D.

Dr. C. W. Purdy, of Chicago, died at his residence in that city January 21st, aged 54. It was stated in the daily press of Chicago that his death was the result of a complication of diseases, caused by overwork. He was born in Kingston, Ontario, in 1846, and received his medical education in Queen's University, where he graduated M.D. in 1869. During his student

days, he spent his summer vacations in the office of his brother-in-law, Dr. H. W. Day, who at that time practiced in Trenton. After graduating, Dr. Purdy practiced for a short time in the village of Hastings, in East Northumberland. From Hastings he went to Chicago, where he went into general practice. Very soon after settling in the Windy City, he entered upon the chief work of his life—the study of diseases of the kidneys. After studying for some years, he went to Great Britain and the Continent, where he continued work in his chosen specialty. He published a number of books on diseases of the kidneys, and for many years before his death was generally recognized as the first man in his own department on this continent. On account of his eminence as an author and practitioner, his *alma mater*, Queen's University, honored him by granting him the degree of LL.D. Dr. Purdy had many personal friends in Canada, especially in the Bay of Quinté district, where he was born and educated. His *confrères* in this country who knew him from boyhood until the time of his last illness, watched his career with great interest, and rejoiced in the marked success which attended his untiring efforts. This success was not so much due to anything like brilliant genius as to persistent and continuous hard work. The news of his death came as a sad surprise to the majority of his Canadian friends, who had not previously heard of his illness.

Personals.

Dr. T. Bruce Hewson (Trin. '99) has commenced practice in Colborne.

Dr. W. B. Thistle spent the holidays with his parents in Downie.

Dr. Herriman, formerly of the Hamilton Asylum, is now at Kingston.

Dr. William Osler, of Baltimore, paid a flying visit to Toronto on January 20th.

Dr. Graham, of Clinton, spent a few days in Toronto in the latter part of January.

Dr. Rennie is acting Medical Health Officer in Hamilton in place of Dr. Ryall, deceased.

Dr. Emily Stowe and her daughter, Dr. Augusta Stowe-Gullen, left Toronto January 24th for Florida, where they will spend the rest of the winter.

Dr. St. Charles, of the Orillia Asylum, has been appointed a resident in the Hamilton Asylum.

Dr. Wilson, of the Brockville Asylum, has been transferred to London, to replace Dr. Hobbs.

Dr. Frederick A. Hopkins, of Montreal, was killed instantly by a railway accident, Dec. 1st, age 34.

Dr. Sands has been appointed surgeon to the Kingston County Jail in place of Dr. Oliver, deceased.

Dr. George McDonagh, of Toronto, left February 3rd, on a two-months' trip among the West India Islands.

Dr. James F. W. Ross left Toronto, January 18th, on a six-weeks' trip to Nassau, New Providence Island, and others of the West Indies.

Dr. Allen Baines, of Toronto, had an attack of la grippe which confined him to the house from Jan. 4th to Jan. 7th.

Dr. D. McLarty, of St. Thomas, was elected President of the Elgin University of Toronto Alumni Association, which was recently organized.

Dr. D. G. Revell (Tor. '00) has been appointed Fellow in Anatomy in the University of Chicago, under Professor L. F. Barker, M.B. (Tor. '90).

Dr. A. T. Hobbs, who has been one of the resident physicians of the Asylum for Insane, London, has resigned his position and entered upon general practice.

Dr. J. T. Fotheringham, of Toronto, went to St. Catharines January 26th, to recuperate after a slight attack of influenza, and returned in a few days, much improved.

Dr. John E. Weeks has been appointed Professor of Ophthalmology of New York University and Bellevue Hospital Medical College, in the place of Dr. Noyes, deceased.

Dr. Kennedy McIlwraith, of Toronto, went to Hamilton January 31st, on account of the death of his mother, which occurred suddenly that morning, and returned February 4th.

Dr. Laidlaw, formerly assistant physician at the Asylum for Idiots, Orillia, and who has recently returned from active service in South Africa, has been transferred to the Brockville Asylum.

The members of the Toronto Camera Club presented Dr. Edmund E. King with a Cook lens as a token of their esteem, and as a mark of appreciation of the valuable services rendered by him to the club during the last five years, in which he was their President. The lens is said to be an admirable piece of workmanship, and a credit to the noted firm that manufactured it.

Dr. William Cuthbertson (Tor. '83), of Chicago, visited Toronto, January 4th. According to his report, the members of the Canadian contingent settled in the Windy City are doing remarkably well.

The New York *Sun* has published a number of articles on the last century as to its progress in great subjects. One of the most able and most interesting of the series is a paper on medicine by Prof. William Osler, of Baltimore.

We learn from the daily press that Dr. Chestnut, Medical Superintendent of the Winnipeg General Hospital, became suddenly blind, January 20th, while attending to his ordinary routine work. He had lost the sight of one eye some years before.

The able and genial President-elect of the Canadian Medical Association, Dr. Chown, sent New Year's greetings to all the members. We understand that Dr. Chown and his *confrères* of Winnipeg and vicinity will give a royal reception to the visiting members during the next annual meeting, which will be held in the latter part of August. Members are requested to keep Winnipeg and the meeting in view when making arrangements for their holiday trips during the coming summer.

Dr. I. J. Dwyer, of Toronto, is still engaged at post-graduate work in Europe. He went to Leipsic in August and remained there until the first week in January. While there he devoted much time to the study of the nervous system, working in Prof. Held's private laboratory. He also devoted considerable attention to medicine and pathology. He left Leipsic early in January and went to London, where he will remain about five or six months. He will return to Canada next summer, after an absence of more than a year.

Surgeon-major Osborne, who recently returned from South Africa, where he acted as one of the surgeons to the first contingent for a year, was the guest of honor at a banquet tendered by his fellow-doctors at the Hotel Royal, Hamilton. Dr. E. B. O'Reilly officiated as chairman, and the speeches included an interesting talk by Dr. Osborne on the military and surgical operations of the Canadian army in South Africa. Other toasts were "The Red Cross Society," associating the name of Miss Russell, which was responded to by her father, Dr. Russell; "The Army and Navy," to which Dr. Griffith responded; "Our Visitors," with which was associated the name of Dr. James D. Thorburn, of Toronto; "The City Hospital," with responses by Drs. O'Reilly, Morton, Mullin, and Rogers; "The Ladies," with Dr. Park as their champion; and "The City Council," with Alderman Dr. Langrill as their chief sponsor.

The Canadian Practitioner and Review.

VOL. XXVI. TORONTO, MARCH, 1901.

NO. 3.

Original Communications.

THE RELATION OF OVARIAN DISEASE TO INSANITY AND ITS TREATMENT.*

BY A. T. HOBBS, M.D., LONDON, ONT.

The mental life of woman conforms to the great physiological divisions of her physical existence, covering the the periods from childhood to womanhood, from womanhood to the menopause, and from the menopause through her declining years. The mental characteristics vary markedly with the changing periods. The romping and hoidenish girl of the first takes on all the instincts of vigorous motherhood pertaining to the second period, and these give way at the menopause to the placid contentment and sedateness of advancing age.

Coincident with these physical and mental transitions occur changes in the reproductive system, the proper performance of which exercises a vital importance on the well-being of woman. The development of ovulation, the continuance of the ovarian function, and the cessation of this physiological process are full of perils for the female sex. The germinating organism, weighing in all only 80 grains, is liable to the ingrafting of pathological processes at any period of existence, but more especially when ovulation is active. When such lesions occur, the disturbance of functioning ensues, and this is succeeded by a series of nerve storms ranging in gravity from localized abnormal sensations to profound mental derangement. It is curious, but nevertheless true, that alienist writers

*Read before Lambton County Medical Society, February, 1901.

generally overlook, or take but little notice of these ovarian lesions, which are such important factors in the causation of insanity. They devote more attention to the insanity brought on by irregularities of menstruation, when many of these irregularities are simply indicators of disorders of ovulation. The germ-producing organ is certainly of a more delicate structure, and more highly complex, and, therefore, must exercise a greater potentiality in the human economy than a mere receiving organ. The interdependence of the organ of reason and the organ of reproduction is clearly shown by the history of 40 cases of ovarian disease with complicating insanity, and by the good mental results which followed the surgical treatment of the different ovarian lesions. The accidents and diseases resulting from maternity do not occupy as prominent a place in initiating disease of the ovary as one would suppose, as 20 out of the 40 cases had never borne children. The influence of heredity is a feature that cannot be overlooked, as 40 per cent. of these cases gave a direct or indirect history of hereditary tendency, and the probability is that the percentage would be larger still if a complete inquiry had been made into the family record for two or three preceding generations.

The diseases of the ovaries affecting these 40 cases fairly covered the gynecic range. They consisted of cysts that were all either simple, multilocular, dermoid or papillomatous, weighing from a few drachms to fifteen pounds; or were fibroid degenerations, ovarian abscesses, hematomas, inflammatory affections, and prolapsed conditions.

In 28 of the 40 cases there were present complicating lesions of other pelvic organs. Thorough examination of the pelvic organs of these patients under anesthesia was invariably carried out, and even then it was not always easy to determine whether the ovary or ovaries were sufficiently diseased to warrant even an exploratory incision, as it is not necessary for an ovary to be enlarged to be badly diseased.

The insanity occurring in many of these ovarian cases usually appeared during the onset of ovulation, or a few days prior to menstruation, or the maniacal propensities or delusions already existent in a chronic became exaggerated. Coupling a history such as this of an insane patient with a peculiar resilient feel obtained in a bi-manual examination of an ovary only slightly enlarged, quite a fairly positive diagnosis can be made of a diseased cystic ovarian condition.

The most frequent type of ovarian insanity is that of mania. Maniacal symptoms were present in over 90 per cent. Sexual delusions were the exception, but when present were pronounced. Excitability, talkativeness, restlessness and de-

structiveness were the main features evidenced in the maniacal. Even the melancholics became excited and more talkative with the onset of ovulation.

The preparatory treatment followed the usual surgical rules as far as practicable, but special care was taken with the preparation immediately prior to operation when the patient was under the anesthetic. The operations necessarily varied according to the complications present. In seven of these patients it was found necessary to do hysterectomy, four by the abdominal route, and three per vaginuin; in 24 cases single or double oophorectomy was done, but in the remaining nine a part of one or both ovaries was preserved after the excision of the diseased portion. Out of the 40 cases two, or 5 per cent., died—case No. 2 from pneumonia on the 12th day, and case No. 146 in a week succeeding operation from septic pneumonia. The pus tubes and ovarian abscesses in the latter patient unfortunately ruptured during operation. The remaining 38 or 95 per cent. made good physical recoveries.

As to the subsequent mental history of these cases, the results were surprisingly good. The majority of those who recovered improved rapidly after operation, being perfectly well mentally inside of three months. Some, however, took a year to regain their normal mental attitude.

The mental classification and recovery rate was as follows:

Acute mania in	10	cases with 7 recoveries.
Chronic mania in	22	" " 8 "
Epileptic mania in	2	" " 0 "
Folie circulaire in	2	" " 1 "
Psychocoma in	1	" " 1 "
Acute melancholia in	3	" " 2 "

Of the 19, or 47½ per cent. who recovered, 6 had been insane under 1 year, 14 between 1 and 2 years, 1 between 2 and 3 years, 3 between 4 and 5 years, and 4 over 5 years. There were also 10 or 25 per cent. who improved and are still improving—2 of whom have been insane less than 1 year, 1 between 1 and 2 years, 2 between 2 and 3 years, 1 between 3 and 4 years, and 4 over 5 years.

Heredity, directly and indirectly, affected 16, or 40 per cent. of the whole. Following operation on the two epileptics there was absolutely no mental result and the convulsive attacks still continue.

Taking the 12 uncomplicated cases there were 7, or 58 per cent., recoveries and 2, or 17 per cent., improved, or a total of 75 per cent. who received mental benefit as a result of the surgical treatment.

In 28 ovarian cases there were present other lesions which necessitated additional treatment, rendering the chances of

mental recovery somewhat less, although 12, or 43 per cent., recovered, while 8, or 28 per cent., improved. This would show that 71 per cent. of the cases that were complicated were immensely bettered by operative measures.

As illustrative of the good work succeeding the treatment of pelvic lesions, I will detail the history of a few cases according to the numbers they occupy in the gynecological list.

CASE 1.—Admitted December 16th, 1899, at age of 27, was single. Had been insane eight months prior to admission. No hereditary history. At the time of operation, April 27th, 1893, she was classified as a chronic maniac, with marked sexual delusions, and was at times violent and destructive. Both ovaries being badly diseased, were removed. Her mental recovery was slow, but steadily progressive. She was discharged perfectly well, both physically and mentally, on September 11th, 1896, after an asylum residence of seven years.

CASE 51.—Was admitted November 10th, 1896, at age of 25. She was unmarried, and of good education. Her father was at one time mentally deranged for a short period. This patient had, before operation December 1st, 1896, been in other asylums since May 28th, 1892. A left ovarian cyst as large as an orange was removed, and the left ovary being adherent was partially excised. For two months she had two or three violent outbursts of excitement, and destroyed all her clothing. After that time she seemed to become suddenly well, and remained so until her discharge on September 12th, 1897, after spending $5\frac{1}{2}$ years in three different asylums for insane, and classified as a chronic, hopeless maniac.

CASE 56.—Was admitted on December 3rd, 1896, at the age of 30. She had had three children. This case was one of peculiar interest. She was found wandering in a condition of dementia, on the G.T.R. station platform in London. She could give absolutely no history of herself. After a residence of a month in jail she was removed to the asylum for treatment. On December 29th, 1896, she was operated upon. The uterus and ovaries were grossly diseased and bound down in pelvis. The uterus when freed was suspended to the abdominal wall, but both ovaries were so badly diseased that they were removed. Subsequent to operation she was very excited and noisy for two days, and woke up on the third morning perfectly well, mentally. She then detailed a full history of herself: how she had been insane for some time previously in the United States, and being discharged improved from a U. S. asylum; she relapsed mentally and finally got separated from her family and wandered to London. She was discharged, fully recovered, on June 16th, 1897, and sent to her friends in Pennsylvania.

CASE 111.—Admitted on June 4th, 1897. Was married, no children, but had a miscarriage. No heredity. On May 10th, 1898, she was operated on for a diseased cervix uteri and a displaced uterus by the Alexander method. She made a good physical recovery, but her mental condition got worse. She was kept in the refractory ward most of the time. It was noticed that the insanity was exaggerated at time of ovulation, and on examination the right ovary felt a little enlarged and resilient. She was operated upon on December 18th, 1900. The right ovary was found entirely diseased and the left ovary, although not enlarged, was bound down to the broad ligament with a coil of intestine adherent to it. Both ovaries were removed, and since that time she has been perfectly well mentally and is gaining physically.

CASE 227.—Was admitted August 16th, 1900, at the age of 22. Had been married three years, but had no children or miscarriages. Had an eccentric maternal grandmother. She herself had had chorea six years previous to this. Present attack began June 15th, 1900. She was acutely maniacal on admission and remained so until operation, October 23rd, 1900. The ovaries, on examination, felt slightly larger than the normal, the left a little more so than the right. Celiotomy was done and excision of left ovary was made, reducing it to one-third of its former size. The left ovary was relieved by puncture of several cysts. She made a good physical recovery. The mental condition lessened in acuteness immediately, and she gradually improved and was sent home on probation on December 8th, 1900, quite well. She still remains well and has increased considerably in weight.

As to why diseases affecting the organs of ovulation interrupt normal mental functions in so many of the female sex, it is difficult to conjecture. Plausible theories may be advanced as possible explanations of this phenomenon. Two theories are advanced as probable solutions, viz.:

1. The reflex theory: This theory hinges upon the fact that irritation produced in one organ by disease affects its numerous nerve filaments, thence from these through the nerve plexuses connecting the various organs of the body it reflects its irritability upon one or more of the other organs. The brain being but an integral part of the body is just as liable to disturbance of its physiological mental functions, as shown by various insane phases, as is the vomiting which is produced by a pregnant uterus. Insanity is very liable to occur in those whose brains are unstable in character, or are afflicted by an hereditary tendency to mental breakdown when suffering from pelvic disease.

2. The internal secretion theory: This is founded upon a theory advanced by some German physiologists who claim that

CASE No.	INSANITY.	DURATION OF INSANITY.	HEREDITY.	OVARIAN DISEASES.	OPERATION.	COMPLICATIONS.	RESULTS.	
							PHYSICAL.	MENTAL.
1	Chronic mania.	4 years.	None.	Both ovaries cystic and enlarged.	Ovariectomy.	Cysts of broad ligament.	Recovered.	Recovered.
2	"	11 years.	Nephew.	Left ovarian tumor (cyst).	Ovariectomy.	None.	Died on the 12th day of pneumonia.	Improved.
9	"	2½ years.	Cousin epileptic.	Left ovarian tumor (cyst).	Ovariectomy per vaginum.	None.	Recovered.	"
13	"	3½ years.	Paternal grandmother.	Both ovaries diseased and adherent.	Ovariectomy.	Retroverted uterus.	"	"
36	"	1½ years.	Cousin.	Left ovarian tumor (cyst).	Ovariectomy.	Retroverted uterus.	"	Recovered.
44	"	7 years.	Uncle.	Left ovary diseased and prolapsed.	Ovariectomy per vaginum.	Lacerated cervix and perineum.	"	"
51	"	5 years.	Father.	Left ovarian tumor (cyst).	Ovariectomy.	None.	"	"
56	Psychocoma.	1 year.	None.	Both ovaries diseased and adherent.	Ovariectomy.	Retroverted uterus.	"	"
62	Chronic mania.	2 years.	Father and mother.	Right ovary fibroid and left ovary cystic.	Ovariectomy.	Retroverted uterus.	"	"
64	Acute mania.	1 year.	None.	Both ovaries cystic and prolapsed.	Ovariectomy.	None.	"	"
67	Chronic mania.	1½ years.	Two brothers.	Ovarian tumors (cyst) and adherent.	Abdominal Hysterectomy.	Fibroid tumor of uterus.	"	Improved.
80	"	8 years.	Aunt.	Right ovarian tumor (cyst) and left ovary prolapsed.	Vaginal Hysterectomy.	Chronic metritis, uterus displaced and cervix badly lacerated.	"	Unimproved.
85	"	8 years.	Mother and sister.	Both ovaries prolapsed and completely cystic.	Ovariectomy.	Uterus retroverted and a concretion in appendix.	"	Improved.
88	"	2 years.	None.	Both ovaries cystic.	Vaginal Hysterectomy.	Complete procidentia of uterus and torn cervix.	"	"
90	"	5 years.	"	Papillomatous cyst of left ovary weighing 15 lbs., partly fluid and partly solid.	Abdominal Hysterectomy.	Uterus involved in cyst mass.	"	Recovered.
100	Acute mania (folie circulaire).	6 months.	"	Both ovaries completely diseased.	Ovariectomy.	Uterus acutely antifixated.	"	Unimproved
102	Chronic mania.	16 years.	Father, uncle and aunt.	Both ovaries prolapsed and diseased and adherent to pelvic contents.	Abdominal Hysterectomy.	Uterus and all pelvic organs involved in mass.	"	Recovered.
108	"	23 years.	None.	Left ovary found complicating a left inguinal hernia.	Ovariectomy (via inguinal canal).	Left inguinal hernia.	"	Unimproved.
111	Chronic folie circulaire.	4 years.	"	Both ovaries diseased, the left being also adherent to a coil of intestine.	Ovariectomy.	Uterus retroverted and cervix lacerated.	"	Recovered.
120	Acute mania.	1½ months.	Brother epileptic.	Left ovarian tumor (cyst) and right ovary also diseased.	Ovariectomy.	None.	"	"
137	Epileptic mania.	10 years.	None.	Both ovaries prolapsed and cystic.	Ovariectomy per vaginum.	None.	"	Unimproved.

CASE No.	INSANITY.	DURATION OF INSANITY.	HEREDITY.	OVARIAN DISEASES.	OPERATION.	COMPLICATIONS.	RESULTS.	
							PHYSICAL.	MENTAL.
144	Chronic mania.	4 years.	None.	Both ovaries cystic.	Celiotomy and puncture of ovarian cysts.	Two pedunculated fibroid tumors.	Recovered.	Unimproved.
145	" "	3½ years.	"	Both ovaries diseased and adherent to <i>cul-de-sac</i> .	Ovariectomy.	Uterus retroverted.	"	"
146	Acute mania.	4 months.	Father.	Abscesses of both tubes and ovaries.	Abdominal Hysterectomy.	Uterus large and friable.	Died on the 7th day from septic pneumonia.	
149	" "	10 months.	None.	Cysts of both ovaries.	Celiotomy per vaginum and puncture of cysts.	Coil of intestines and knuckle of omentum adherent to pelvis.	Recovered.	Recovered.
150	Acute melancholia.	4 months.	Sister	Hematoma of right ovary; dermoid cyst of left.	Ovariectomy.	None.	"	Improved.
153	Chronic mania.	4 years.	None.	Dermoid cyst of left ovary containing teeth and hair.	Ovariectomy.	None.	"	Recovered.
154	" "	5 years.	"	Left ovary diseased and enlarged.	Ovariectomy.	Uterus retroverted.	"	Improved.
157	Acute mania.	10 months.	"	Both ovaries very cystic.	Celiotomy and puncture of cysts.	Three uterine fibroids and an adherent appendix.	"	Recovered.
168	" "	7 months.	"	Hematoma of right ovary and cystic condition of left.	Celiotomy and exsection of hematomas of right ovary and puncture of cyst of left.	None.	"	Unimproved.
172	Acute melancholia.	1 year.	"	Ovaries and tubes bound down to uterus.	Celiotomy and separation of adherent tubes and ovaries.	Uterus retroverted.	"	Recovered.
177	Acute mania.	4 months.	"	Both ovaries cystic, right more so than the left.	Celiotomy and puncture of cysts.	Uterus retroverted.	"	"
188	Chronic mania.	11 years.	Uncle.	Right ovarian tumor (cyst).	Vaginal Hysterectomy.	Uterus adherent to adnexa.	"	Improved.
189	Epileptic mania.	2 months.	None.	Both ovaries diseased, prolapsed and adherent.	Ovariectomy.	Uterus retroverted and cervix lacerated.	"	Unimproved.
194	Chronic mania.	11 years.	"	Right ovary diseased.	Ovariectomy.	Uterus retroverted and had a fibroid tumor.	"	Improved.
203	" "	3 years.	"	Right ovarian tumor (cyst).	Ovariectomy.	Hematoma of right vulva vaginal gland and uterus retrodisplaced.	"	Unimproved.
207	" "	2 months.	"	Left ovary badly cystic.	Celiotomy and puncture of cysts.	Uterus retroverted.	"	Recovered.
214	Acute melancholia.	1 month.	"	Right ovary diseased and prolapsed and adherent to pelvis.	Ovariectomy.	Uterus retroverted.	"	"
227	Acute mania.	4 months.	Grandmother.	Both ovaries cystic and larger than normal, especially the left.	Celiotomy and exsection of diseased portion of left ovary and puncture of cysts of right.	None.	"	"
242	" "	6 months.	None.	Both ovaries cystic.	Celiotomy and puncture of cysts.	Uterus retroverted.	"	Improved.

there is "a normal and constant contribution of specific material by the reproductive glands to the blood or lymph, and thence to the whole body," and "this secretion reacts upon the rest of the organism through the nervous system." If this is true, the deduction may be made that the changed condition in the ovary brought about by pathological disease would produce a pathological secretion. If, therefore, the healthy ovarian secretion exercises such a profound effect upon the nervous organism in health, what must be the effect on the nervous system when there is unloaded into the circulation noxious diluents of such unknown potency as the products of deranged ovarian functions.

These theories are offered in explanation of how ovarian disease acts in producing mental alienation.

In conclusion, I desire to emphasize the fact that, from experience gained by the examination and treatment of these cases, it is a serious error for physicians to overlook the functions of ovulation and menstruation in women bordering on the domain of insanity. The determination of the presence or absence of disease of the reproductive organs should be a *sine qua non* in the early treatment of all insane women, and the neglect of this precaution may condemn many of these unfortunates to a life of untold misery until death releases them from mental thralldom.

The table on preceding pages gives details of each case, both mental and physical.

ASHEVILLE, NORTH CAROLINA, AS A HEALTH RESORT FOR PULMONARY TUBERCULOSIS.

BY J. PRICE-BROWN, M.D., TORONTO.

This little city in the mountains, the eastern "Garden of the Gods," the "Land of the Sky," is situated, almost as straight as a drop-line, a thousand miles south of Toronto. It lies in the very heart of the lower Blue Ridge region. This noble chain of mountains commences in the rugged highlands of Quebec, and traces its course southwards through New Hampshire, Vermont, New York, Pennsylvania and Virginia, known successively as the Green, White, Adirondacks and Alleghanies, growing in majesty as it stretches southwards into the Blue Ridge Mountains of Western North Carolina and Eastern Tennessee. Here they reach their highest elevations, and stretch out in massiveness and grandeur in successive ridges for many miles. In lower ranges they still extend southward, through South Carolina, Georgia and Alabama, finally merging into the lowlands of the latter State.

In the middle of this highest region, and surrounded by a score of the tallest peaks east of the Rockies, Asheville is situated. The town itself averages 2,300 feet above the sea, and is built upon a succession of lower hills, which look, when surveyed from the summits of any of the mountains around it, like huge billows of the ocean, surrounded by more gigantic ones on every side.

Although they can be observed in every direction, they are the most picturesque to the south and west, and when observed from the top of the great central plateau, half a hundred distinct summits, all between 4,000 and 6,000 feet in height, can be seen stretching in successive ranges, one behind the other, as far as the eye can reach. The scene is one of surpassing loveliness, tinted in various hues, from deep blue to violet and amethyst. The highest peak in this direction is Pisgah, at an elevation of 5,757 feet, while away to the east towers Mount Mitchell, 6,717 feet, the highest of all the mountains in this long range.

Two rivers run through Asheville, the French Broad and the Swannanoah, both beautiful streams; and from the latter, several miles above the city, the water supply is obtained.

The hills and mountains, where not built upon or cultivated, are covered with wood, and the soil is everywhere fertile, although the terra-cotta color of the clay mud gives the surface in many places a peculiar aspect.

The foundations, cellars and lower stories of the houses are usually of brick or stone; but the upper ones, wide verandahs, balconies, porticos, etc., are almost always of wood. Very many of the houses have shingled walls, and these are often tinted of a green, or brown, or olive color.

The usual method of heating the houses is by stoves and fireplaces, and rarely by furnaces; and the fuels consumed are chiefly wood and soft coal. The smoke of the latter has not so far proved a material disadvantage, though it is certainly a detriment to the beauty of the town. The lighting almost throughout is by electricity.

In the poorer localities, particularly those occupied by negroes, one is struck by the peculiarity of the dwellings, as many of them stand on stilts—rude blocks of wood or little piles of bricks supporting the four corners, leaving the under-floors throughout open to every breeze that blows.

Of hotels in Asheville there are a goodly number. The Battery Park Hotel is a fine, handsome structure, supplied with all the modern appointments—large rooms, wide corridors, immense balconies. The entrance floor is devoted to offices, dining halls, reception-rooms, parlors, drawing-room, palm-room, etc.—the latter being filled with tropical trees and plants, and rustic chairs. A piano and two large log fireplaces help to make the room homelike. The view from the verandahs and terraces down to the town and beyond to the mountains is particularly fine. The cuisine is good—waiters are attentive—and the charges from \$4 a day or \$25 a week, upwards.

Kenilworth is another fine hostelry, built to resemble the Kenilworth of poetic fame. It stands at a higher elevation and on the brow of Beaucatcher Mountain. The charges are about the same as those at Battery Park, perhaps a little higher.

The Manor is also a famous resort. The elevation is greater than either of the other two, and is situated on the mountain's brow, in the middle of a handsome park. Built largely of stone and ornate in design, it has a fine appearance and commands a magnificent view of the distant peaks. It accommodates a large number of guests, and has surrounding it several pretty cottages supported by the same management for the benefit of the overflow. The rates are \$15 a week and upwards.

All these hotels profess not to take consumptive guests; but there is little doubt that many people go to them in the early stages of the disease, when the symptoms are too slight to be noticed, or even to be suspected by the proprietors. Besides these, there are many other hotels, and boarding-houses innumerable.

The permanent population of Asheville numbers about 15,000. This is probably the highest limit, one-quarter or one-third of

them being colored. The average floating or visiting population is estimated at 5,000, though this point is a difficult one to accurately estimate. Of course the large majority of these are invalids who come to recuperate their health. During the summer time the influx is from the south, and during the winter from the north and east and west.

Besides all these, there is another element in the daily visitation which is worthy of note—the mountaineers, or poor whites of the hills. They are a long, lanky, lean, lazy, taciturn set of people. With wide sombrero hats, old as the hills, clothes of all hues toned down by time to one color, with hands in pockets and usually without overcoats, they will stand for hours on the streets or around the market square. They and the laughing, garrulous negroes vie with each other in numbers, and all day long may be counted in scores, if not in hundreds. Without money and with nothing apparently to do, one wonders how they eke out an existence. But among the lowest elements of society in the south it does not require much to do that. The commonest foods are cheap—chickens are abundant, if not in your own yard, in that of your neighbor, and the elements deal kindly with all alike.

Then about the physicians. In this city of 20,000 people at the most, all told, there are sixty physicians in good standing, one of whom is a homeopath. We must remember, too, that the colored people, so far as paying a physician is concerned, are practically out of the question. Still the doctors live and dress well. They have their downtown offices and many of them own a pair of horses and have a colored driver, and attend swell parties and clubs, and banquets as well.

The climate of Asheville is believed to be one of the ideal ones of America. For nearly three hundred days in the year the sun shines. The rainfall is rarely severe, and is distributed pretty evenly throughout the year. The nights in winter are rarely very cold. Only occasionally is there severe frost, and never even in the severest weather does it continue many nights in succession. In the summer time the nights are always cool, and although the temperature may range high between 10 a.m. and 5 or 6 p.m., it invariably falls from that hour until the morning, ensuring comfort and rest for the sleeper.

Owing to the equability of rainfall and the comparative evenness of temperature, the relative humidity only averages about 65°, being about the mean between the humidities of New York and Denver, Colorado, the former being about 75°, and the latter 55°. When we add to this that the air is pure, and light and bracing, and that the temperature is such that tuberculous patients can take sun baths out on the verandahs

for hours together almost every day in winter, the indications that the climate is favorable for the treatment of this terrible and all prevailing scourge of the human race, would seem to be certain.

The medical testimony upon this subject is varied in character, although it all points to the material advantages which Asheville offers over other health resorts in the treatment of this disease. During a seven weeks' residence here, I have made many enquiries among leading physicians, and I have also come in actual contact with many people who came to Asheville years ago in a tuberculous condition, and who are now practically well.

First of all, it is conceded on all hands that if patients come to Asheville in the early stages of tuberculosis, when there is little or no fever, but in which there is consolidation of one or both apices without softening, but in which tubercle bacilli can be found in the sputum, cures can in a majority of cases be accomplished, if the patients will place themselves under the care of the physician, and remain say for two years. Over and over again have I heard physicians make the statement that these patients can usually return home and remain free from the disease for years at least, and some of them for life.

Cases in a more advanced condition, even with cavity in one lung and considerable infiltration, as well as commencing throat symptoms and daily rise of temperature of two or three degrees, can also be arrested in many instances and remain free from disease, but may require to remain permanently here, or at least for several years.

As instances, I may briefly refer to several cases. A physician here reported three cases which came for treatment from St. Louis—one of them was a physician. St. Louis is an unhealthy place, with limestone roads, the dust from which produces a good deal of laryngeal irritation. All three had consolidation, fever, bacilli. All remained in Asheville between one and two years, and all returned to St. Louis years ago and are still well.

A barber with cavity in one apex, and consolidation of the other, of tuberculous family, temperature 100°, respiration 26, pulse 100, night sweats, came to Asheville four years ago. He has been under physician's care with serum treatment. Is now well, respiration 16 to 18, pulse 75, temperature normal. Has been working ten hours a day at his business in the town for years.

A leading physician came here from Cincinnati five years ago by recommendation of a lung specialist, as the only chance to prolong his life, not to cure the disease. He is not well now

but he has neither cough, expectoration nor fever, and does one of the largest driving practices in the city.

The physicians state that, although the influence of the climate is invaluable, the benefit derived from it is materially enhanced by the aid of professional care. Hygienic, dietetic and gymnastic measures, as well as regulated exercise are insisted on. The patients are out in the open air a great part of the time both summer and winter. I have seen along the side of the street facing the south during the middle of the day, although there was frost in the air, a dozen patients sitting in the sun on the boarding-house verandahs. They were wrapt as they thought necessary. Some of the women were knitting or sewing, and the men perhaps reading.

Of internal treatment for pulmonary tuberculosis many physicians give little. Others, though they are not numerous, give creosote, etc., etc. Many, however, give medicated inhalations with compressed air; and almost without exception the leading men use the pneumatic cabinet in suitable cases.

Dr. Battle, one of the leading physicians and a scholarly man uses the cabinet daily with many cases, and in the thousands of times in which it has been used in his office, he has never seen hemorrhage produced as a result. Dr. Karl Von Ruc, of the Winyah Sanitarium, says that, instead of producing, he has successfully checked hemorrhage by placing the patient in the pneumatic cabinet, and regulating the density of the air of respiration. Dr. Williams, and others also, eulogize the benefit which patients receive from its use, though all agree that it can only be used in carefully selected cases.

Dr. Battle also has a special cabinet for inhalation of medicated vapor, which he finds in many cases extremely beneficial.

Drs. Sawyer, Paquin, and others believe largely in the benefits to be derived from inhalations, and the former has found material advantage to his patients from an attachment to his apparatus, which induces a species of internal massage to the lung cells.

The question of treatment by Koch's tuberculin and its various derivatives, and also of serum treatment, and treatment by the solution of the tubercle bacilli, is of great moment here. The physicians differing somewhat as to the relative merits of different preparations; but all agreeing that when used at all, the doses should be so regulated as to produce little or no reaction.

All agree, likewise, that exercise in this disease should stop short of fatigue, and should not be indulged in when the patient is in a high febrile condition.

WINYAH SANITARIUM.

This institution is a private one, owned and controlled by Dr. Karl Von Ruc, who has had many years experience in sanitarial treatment of pulmonary tuberculosis. He is probably the only man on the continent who has made a financial success of the private sanitarium, devoted exclusively to the treatment of this disease. Hence, no matter what our own views may be, with regard to the special treatment which he terms specific, his general methods as well as his specific ones, are worthy of the closest consideration; particularly when we remember that he is a specialist, in this disease, of almost world-wide reputation, and has had an immense number of cases pass through his hands. Dr. Von Ruc has also two clever, well-educated assistants, Drs. Dunn and Stevens, who help in the internal management of the institution.

Winyah Sanitarium stands at an elevation of 2,350 feet. It is surrounded by trees in a park covering seventeen acres, and has one of the electric car lines of the city passing within a hundred yards of the entrance, on its way to Look-Out Mountain.

The building is surrounded by verandahs on every side. The parlors are large and well furnished; the bedrooms spacious and commodious, each one being provided with closet, marble washstand, hot and cold water, steam-heating, electric light, etc. The beds are of full size, but two people are never allowed to occupy the same bed or room. The building, accommodating forty patients, is at the present time full; but a new one, to be connected with it by glass corridors, and to accommodate about thirty more patients, is almost finished. In this, as in the original building, every patient will be isolated in a thoroughly completed private room.

Patients are desired only in the first and second stages—the former being of course preferred. Every patient is treated according to the merits or requirements of his own particular case. The usual length of time for patients to remain in the sanitarium is from three months to one year. Rarely longer than the latter; only shorter than the former when financial or other reasons compel the patient to leave.

When patients are discharged, the majority of them are well enough to return to their homes, the disease having been arrested.

The general treatment consists of hygienic, dietetic, climatic and exercise measures. Medicines are rarely administered internally, except as indicated for temporary derangements of one form or another.

Hygiene consists of cleanliness, bathing, ventilation of rooms,

regular hours of rising and retiring, etc. Patients are not allowed out after night except by special permission. In summer, of course, the evening hours are utilized on the wide verandahs.

Dietetics.—When the digestive organs are in good condition, a full diet, with abundance of milk, fresh meat and eggs; is always enjoined; and in this direction, subject to the above, patients can in a large measure choose for themselves. If the stomach is weak and irritable, frequent lavage by the stomach tube will often increase the digestive powers and hasten recovery. The appetite of the patient is a matter of vital importance, and is, therefore, carefully watched and attended to by the physician in charge.

The best of all tonics for the consumptive is rest. Stimulants are never used except medicinally. Von Ruc believes they have no effect whatever in reducing tuberculosis; and as they injure the stomach when given dietetically, they hasten instead of retard the progress of the disease.

Climatic Measures.—The patient should be out in the open air as much as possible, compatible with his systemic condition. When the patient's temperature is subnormal on rising in the morning, a glass of hot milk is given, after which, wrapped up, he sits on a steamer chair on the verandah in any position he finds most comfortable—usually the semi-reclining one—for half an hour before breakfast. Patients who are, in the doctor's opinion, well enough, take five or ten minutes' walk instead. But in all non-febrile cases, one or other of these must be done out in the sunlight.

Breakfast, in all cases able to take meals in the dining-room, is followed by an hour in the sunlight on steamer chair. And in suitable cases, this half hour before meals and one hour after meals, is prescribed for all the meals taken during daylight.

Exercise.—When the patient has little or no fever, walking exercise of ten or fifteen minutes at regular intervals several times a day, becomes part of the routine treatment. When the temperature reaches 100 degrees, all exercise is interdicted, and semi-recumbency in the steamer chair takes its place. But when the patient's temperature registers 101 degrees, he is immediately put to bed and kept there until it becomes materially reduced. If the temperature of same patient becomes normal or subnormal by morning, the steamer chair before breakfast is resumed, together with the other methods spoken of, and the patient carefully watched with regard to heat, as above indicated.

With regard to active exercise—lawn-tennis, bicycling and dancing are all prohibited. Croquet playing allowed when there is little or no fever—walking encouraged—and horseback riding during the latter stages of recovery.

As said before, internal medicines are rarely given. When asked if cod-liver oil was ever given, Von Ruc replied, "Sometimes. When patients decline to take butter or fat, I tell them they must either take cod-liver oil or butter. They usually take the butter. In a few the oil is preferred."

As in the practice of other physicians in the city, the pneumatic cabinet is used at the sanitarium in suitable cases for lung gymnastics, also inhalations of medicated vapor by means of a compound comminutor. In laryngeal cases, where ulceration is slight or not observable, preparations of methyl-blue are blown into the larynx to aid in discovering abrasions, and subsequent applications will tell positively of the progress made.

It is on what he terms his specific treatment, however, added to the above measures, that Von Ruc founds his unusual success in the treatment of pulmonary tuberculosis. This specific is the "watery extract of the tubercle bacilli" obtained from the bodies of the bacilli by a process of his own, and said to be entirely free from everything but proteids.

On going into his laboratory numerous jars filled with cultures of the bacillus in buillon can be seen in various stages of development, the bacilli in a white mat on the surface and extending up the sides of the jar. The fluid beneath supposed to be filled with the toxins of the bacilli is the foundation for Koch's tuberculin and its various derivations.

According to Von Ruc, the bacilli give off but little toxin, and they themselves are insoluble. The fever of tuberculosis is not the product of the toxin of the bacillus, but of the inflammatory action and caseation produced by the presence of the bacillus. The disintegration and cell detritus poisons the blood and produces the fever.

The comparative failure in treatment of tuberculosis by Koch's tuberculin he assigns to the composition of the fluid used, which consists of fat, cellulose and a small proportion of proteids, the latter being the essential factor in the preparation.

In order to obtain as large a proportion of the latter as possible, and to exclude the other useless elements, he finally succeeded by the following plan. To use his own words, published in 1899:

"The tubercle bacilli are filtered out of the rapidly growing and highly virulent culture. After washing with distilled water for the removal of the remains of the culture fluid, they are dried in a vacuum dessicator. Next they are powdered in an agate mortar, and then extracted with sulphuric ether. This extraction removes the fats. They are again dried and powdered as before, and their further extraction takes place in sterilized distilled water over a warm bath with a temperature

of 120 F. . The proteids becoming dissolved in the distilled water, the fluid is then decanted and filtered through porcelain, when finally the amount of proteids is determined and the preparation standardized to a certain per cent. The watery extract, as produced by me, and into which absolutely no culture fluid enters, is free from such admixtures and other impurities. It is a perfectly pure solution of the germs only, and being filtered through porcelain, is absolutely free from any germs or fragments thereof."

This solution is made of various strengths. Very minute doses are given at first daily by hypodermic injection. Very gradually these are increased, the object being in all cases to produce little or no fever. Should any occur the dose is diminished or stopped for a time, and then continued later on, in all cases avoiding perceptible reaction. The doses are gradually increased as long as required until immunity is produced and the disease arrested.

Of statistics furnished by Von Ruc to prove the success of his method of specific treatment, the following is extracted from proofs now in the hands of the publisher :

COMPARATIVE TABLE OF RESULTS.

	Number of Cases.	Percentage of Recoveries.	Percentage of Improved.
Treated without specific remedies	816	12.1	31.0
“ with Koch’s tuberculin	379	35.5	37.5
“ with antiphtherin and tuberculo- cidin (Kleb’s)	182	32.5	56.8
“ with purified tuberculin (Von Ruc)	166	43.4	39.2
“ with watery extract of tubercle bacilli (Von Ruc)	303	56.1	33.7

I might add that a large number of reliable physicians, after pretty extensive trial, have endorsed this method of treatment. Among them are the names of Dr. Charles Dennison, of Denver, and Dr. Longstreet Taylor, of St. Paul.

One other matter, before closing. I had the pleasure of lunching with the patients who were well enough to appear in the dining-room. Von Ruc and I occupied a table by ourselves at one end of the large room, my seat being situated so as to observe every patient present. There were about twenty-five of them, male and female about equally divided. The ages of most of them would be between twenty and thirty years, a few of them older.

Colored waiters in white coats attended. Each table was furnished with type-written bills-of-fare. The menu was well served, and would vie with any at the hotels in Asheville. The patients differed little in appearance from an ordinary

gathering of hotel guests, with good appetites and pleasant faces. A thing that struck me as singular was the fact that in all that large number there was not a single cough by any one of them during the whole of the dinner hour. On referring this matter to Von Ruc, he said that no one was allowed to come to the dining-room at all if he or she required to cough. In stages of the disease when coughing was an act of necessity the meals were always carried to the patient's room by attentive waiters.

CANCER OF THE UTERUS.

By DR. C. WAGNER.

In the short paper which I have the honor to present to the Pathological Society to-night, I shall speak of some of the early and important changes in the mucous membrane in adeno-carcinoma of the uterus, my remarks being based chiefly upon Thomas Cullen's book on Uterine Carcinoma. To illustrate many points, I have with me prepared sections of uterine scrapings, also sections of the uterus after removal, from a patient who came first under my father's care, later under that of Dr. Ross, having been sent to him for operation.

Cullen had the opportunity of examining and studying many cases of carcinoma of the uterus, and found that in both the squamous and adenomatous varieties there are changes in the mucous membrane early in the disease which are characteristic of carcinoma in this situation, and upon which in many cases a positive diagnosis may be safely made: From the surface of the mucous membrane, in a large proportion of both forms of carcinoma, spring finger-like or branching processes, which are the first to come away in the scraping, and which are very characteristic of cancer. Under the examining finger these processes break down readily and bleed freely. Together they form a cauliflower-like mass which cannot usually be seen unless the growth has commenced upon or extended to the vaginal portion of the cervix.

The microscope shows these finger-like or branching processes to consist of a small amount of stroma supporting comparatively large thin-walled vessels, and a covering of epithelium. In the case of squamous carcinoma the latter consists of an atypical squamous epithelium; in that of adeno-carcinoma there are several layers of epithelial cells, which are as a rule clearly not squamous in character. In the deeper layers columnar cells can usually be seen. The nuclei vary in size and shape and stain deeply. Here and there cells containing unusually large, deeply staining nuclei can frequently be found, and that cell proliferation is active is evidenced by the large number of karyokinetic figures.

In the glands of the normal uterus and on the surface of the mucous membrane above the external os, there is but one layer of epithelium. In adeno-carcinoma an epithelial covering several layers deep is quite a feature. This is not peculiar to carcinoma, however, but may be present in other conditions, for example, chronic endometritis.

Here and there throughout the stroma, small round cells and polymorpho-nuclear leucocytes are usually present.

The changes in the glands in adeno-carcinoma are quite as characteristic, but lying deeper they do not come away so frequently in the scrapings as do the processes. Great caution must, nevertheless, be observed in diagnosing cancer from the appearances of the glands alone, as there are conditions, benign in character, which roughly resemble the carcinomatous condition, but which can usually be distinguished from the latter by a critical eye.

In adeno-carcinoma the gland tissue is much increased in amount, and of an exceedingly irregular construction. The histological picture is that of many gland groups surrounded by stroma and unevenly separated from one another. This last feature must be constantly borne in mind in diagnosing from glandular hypertrophy.

The gland groups are composed of many alveoli, which are separated from each other by little or no stroma. In favorable specimens one may see that such a group is the result of the irregular branching and transformation of a single gland. Many of the lumina are partly bridged across by outgrowths from the epithelium, and that these outgrowths frequently bridge across completely, is stated by several observers.

The epithelium lining the glands is from one to many layers deep. The character of the individual cells varies much in different cases. They may differ little from normal epithelial cells, or may be extremely irregular in shape, size and staining properties, differing so much from normal gland epithelium that they cannot be determined histologically to have originated from such.

The stroma is fairly cellular, and is composed of spindle-celled connective tissue. Here and there throughout it are patches of small cell infiltration.

Adeno-carcinoma must be diagnosed from (1) Unusual thickening of the cylindrical epithelium on the surface and in the glands. (2) Erosions. (3) Polypi. (4) Submucous myomata. (5) Interstitial myomata. (6) Adeno-myomata. (7) Tuberculosis. (8) Squamous cell carcinoma. (9) Endothelioma. (10) Sarcoma. (11) Cases in which glands are normal, but in which there is considerable proliferation in the surrounding stroma. (12) Glandular hypertrophy. (13) Changes in the endometrium in pregnancy. (14) Endometritis. Also various other rare conditions.

CASE.—Miss S., aged about 55 years. Menopause about five years ago. Had a watery discharge from vagina all last summer. The discharge was sometimes slightly bloody. On the 29th of October she had a hemorrhage, and my father was called in. On examination, the os was found to be dilated and a mass of soft tissue could be felt within the cervix. This

latter broke down readily under the examining finger, accompanied by considerable hemorrhage. A tampon was introduced into the vagina and left for twenty-four hours. Six days later a digital examination was made, and the os was felt to be contracted. No more hemorrhage had occurred in the meantime. The tissue removed at the time of the hemorrhage was composed chiefly of long finger-like processes, with here and there nodules of blood clot. The projections were very soft and friable. The diagnosis of cancer was made from the clinical history and gross appearances, and this was confirmed by microscopic examination. On the 21st of November a vaginal hysterectomy was performed by Dr. Ross.

The uterus was opened immediately after the operation by an anterior longitudinal incision. The cervix was found to be much dilated, and from its walls in the region of the internal os and from the lower posterior portion of the cavity of the uterus, a mass of finger-like processes projected into the canal of the dilated cervix. Many of these processes were nearly an inch long, and of equal diameter throughout. They resembled exactly the processes removed in the scrapings. Higher up in the wall of the uterus was an interstitial myoma about one centimetre in diameter. On the mucous membrane of the cavity of the uterus, high up near the fundus, was a slightly raised area which was thought might be a secondary growth. On cutting into the cervical wall the outer border of the new growth could easily be seen at a depth of about three centimetres. Portions of tissue were taken from the cervix, from the myoma, and also from the area on the mucous membrane near the fundus and hardened for sectioning.

The sections of uterine scrapings show the characteristic processes, but no glands. The epithelium covering them is several layers deep. It is, I believe, clearly not squamous in character. Most of the cells are polygonal, but here and there they are columnar. In the centre of the processes are large, thin-walled vessels supported by a small amount of stroma. In the stroma can be seen, here and there, small numbers of small round cells.

The section of the cervical wall shows carcinomatous glands, and in one corner normal glands. The cancer cells are polygonal or columnar, very irregular in size, particularly in certain localities, stain faintly, and are arranged from one to many layers deep. Alveoli lie against each other, with no dividing stroma. There are no processes to be seen, these having been destroyed in the preparation.

The section of the small raised area on the mucous membrane of the fundus is not successful, as most of the membrane has been destroyed in sectioning. There are, however, one or two suspicious places.

In running over the differential diagnosis I spoke of cases in which the glands are normal, but in which there is marked proliferation of the stroma.

Dr. Primrose brought to the laboratory several weeks ago some scrapings which presented just such an appearance under the microscope. The stroma is exceedingly cellular in places, and might at first sight appear to be epithelial tissue, but the glands lie at equal distances from each other, and are perfectly normal. I have brought several sections of these scrapings with me. I do not know the history of this case, but in others of a similar character the patients have suffered from uterine hemorrhages, which were checked for several months by curetting.

REPORT OF AN OPERATION FOR JACKSONIAN EPILEPSY.*

By DR. H. M. THOMAS.

I wish to relate the details of a case that was operated on to-day at the Hopkins Hospital, and which has been to me a most interesting case. The patient was a man aged 45, who lived in the country, and though complaining of epileptic attacks, had never consulted a physician. He had been a fairly healthy man, though never robust, had never used alcohol, did not smoke, and had never been exposed to venereal contagion. About fifteen years ago, in the spring of the year and towards the close of his day's work in the field, he suddenly became unable to speak and felt that his right hand was weak. He walked home, and for two or three days had great difficulty in speaking, and his hand felt numb. He continued his business though, of overseeing his farm. After several months he had a convulsion. He did consult a doctor at that time, was put upon bromides and recovered. About a year following the first attack, while in the field, his right leg became paralyzed and he had to be carried home. He recovered from the paralysis, but began to have peculiar attacks, at first infrequent, but within the last year, several a week. They come on him in one of two ways—first, losing the power of speech, then a twitching in the right side of the face, the hand becomes numb, and then the paralysis passes up the arm and down the leg; or second, it may begin with a twitching in the face, and the loss of speech comes later. He has

* Read at a meeting of the Clinical Society of Maryland, Baltimore, January 4th, 1901.

learned that by taking chloroform he can cut the attacks short. If allowed to persist, and a severe attack comes on, it lasts from a minute to a minute and a half without any loss of consciousness. He is very much upset by such an attack, and at times loses the knowledge of having a hand, that is, without looking at it he would not know that he had it. After the attack is over he cannot speak or use the hand for about half an hour.

Upon examination his cerebral nerves are found to be normal. There is no headache or pain, and the only paralysis is an impaired movement in the side of the face. He closes the eyes, lifts the eyebrows and both lids well, but cannot draw the mouth to the right side. The movements of the arm are perfect, though somewhat weak, and he has muscular atrophy of the first interosseous muscle. His grip is fairly strong, but not as strong as on the left side. He can use his right hand, but dislikes to do so, preferring to button his coat, etc., with his left hand. All the reflexes are exaggerated on both sides, but more so on the right.

The diagnosis of typical Jacksonian epilepsy is as clear as it could possibly be, and it seemed pretty clear that the lesion that produced it was a stationary one. We thought possibly there was some sort of vascular trouble that occurred fifteen years ago, but there was no etiologic factor in support of that explanation. Then we considered its being a stationary growth in the brain, and this appealed to me particularly because of a case which had lasted eight years before there was much paralysis, and in which we did not find a growth at the operation, but discovered it later by microscopic examination. The position of the lesion seemed pretty clear also, as the most objective symptom was the paralysis of the mouth.

In the last work of localization Dr. Halsted did on the brain of the orang-outang, he found an area in the ascending frontal convolution which governs that movement exactly. It was easy then to imagine a lesion in that vicinity that would account for the other symptoms also. We told the patient the nature of the trouble and the possibilities of finding it by operation. He was anxious to have the operation performed, and it was done to-day by Dr. Finney.

He made a large bone flap, exposing an area that showed the fissure of Rolando and part of the ascending parietal convolution, and gave us the area above referred to as the centre of the field. It required about twenty minutes to expose the brain, the bone being very thick, and nothing being found on the dura, we slit it up, but the cortex was perfectly free so far as we could see. The veins of the pia mater were a little congested, but that was all. I tried to stimulate the

cortex by the Faradic current, but failed, probably because the apparatus was not right, and partly because I was not willing to push the matter very far. He has recovered from the operation, in so far as coming out of ether is concerned.

The case is interesting, because in my experience I have never seen or read of a case that presented a more typical picture. That there is a lesion there is absolutely certain, but I think now it is certain that it is subcortical. If so, it may be a lesion corresponding to the tumor found in the case reported in the *Journal of Experimental Medicine* for 1897, Vol. 2. In that operation nothing was seen at all, and nothing was found at autopsy, so we thought there had been a mistaken diagnosis, but microscopic examination revealed a neuroglioma in the motor cortex.

Just one other point I want to bring up, and that is, that the muscular atrophy seen in this case is also present in the case we reported. Muscular atrophy of the character seen here does not occur usually with cerebral lesions, but it does occur at times, and seems to occur from some lesions either in or near the pyramidal tract, and causing an irritation of the tract without actual destruction.

I present this case as one of the illustrations of how very discouraging brain surgery is. We no longer operate for epilepsy as such, and the reason we operated here was that we believed there was a definite lesion that might be removed; it was only a chance, and that chance was not sufficient to do any good. I would not be surprised, however, if that patient goes along for a year without any convulsions. We often find that, for some reason or other, there is a cessation of convulsions after such an operation, possibly because of a change in the circulation. The last case of the kind I had operated upon has had no return of the trouble for nine months, and he thinks we are very unreasonable because we will not operate on his brain to remove his paralysis.

DISCUSSION.

Dr. Randolph Winslow: Why not take out the centre that governs this area?

Dr. Thomas: That has been done, but the trouble is that you leave a scar, and there is just as much reason to suppose that it will act as a focal lesion as that the original disease did.

Dr. A. L. Hodgdon: I think we are all very much indebted to Dr. Thomas for this report, as this is one of the forms of epilepsy that can be relieved or even cured if taken in its incipency. The great trouble in these cases is that they are not taken early enough, and after a while what is known as habit

epilepsy forms. We notice something similar to that in malarial paroxysms, where sometimes after the system is thoroughly rid of the organism we find the paroxysms or chills still continuing. I would like to ask Dr. Thomas if that portion of the second frontal convolution, where the head centre exists, was exposed at this operation to determine whether there was any lesion there; and again, whether it was considered that there might be any other lesion than a tumor present. I would like to know, too, if the attempt was made to stimulate the cortex with the galvanic current.

Dr. Robert Reuling: The case presents certain very interesting features, as Dr. Thomas has pointed out, and one of the main ones is the muscular atrophy. In a work recently published in Nothnagel's series one finds how very rare muscular atrophy is in connection with cerebral cases; only sixteen cases have so far been reported, I believe. Last year I had the pleasure of reporting a case to this society that showed very marked muscular atrophy with intracranial lesion, and the case was remarkable in that the atrophy was a very extreme one ten days after the onset of the disease. With this atrophy there was complete loss of sensation on the affected side. So far as I could tell from the course of the symptoms, I came to the conclusion that the lesion was in the posterior third of the internal capsule; physiologists have agreed now that this portion of the capsule contains the sensory fibres, while the anterior two-thirds contain the motor fibres, so that any lesion of the posterior third would cause a complete hemi-anesthesia, and it is just those cases with sensory disturbances that are associated with muscular atrophy. You remember that Dr. Thomas' case presented sensory disturbances, but I believe his case is more subcortical, and does not involve the internal capsule itself.

Dr. Thomas: It is not easy to know, when looking at a brain exposed for operation, just what convolutions you have exposed. In this case we believed we had exposed the fissure of Rolando just at its edge and a space of about two inches beyond that. We also passed a blunt director around it until we could see the other side of the fissure of Sylvius. No lesion was noted anywhere. All the centres above and anterior to the ascending frontal are very indefinite, and most of the centres for the head are in the ascending frontal convolution. I do not know any condition of the cortex that will respond to interrupted galvanism that will not respond to Faradism. I used a strong Faradic current, so strong that it was painful when applied to the tongue before the electrodes were sterilized. I would be glad to be informed about the galvanic stimulation of the cortex.

Selected Articles.

DIET OF TYPHOID FEVER.

By GEORGE DUFFIELD, M.D., DETROIT.

All authorities agree that the diet of typhoid fever should be carefully regulated; all food administered should be liquid, and should be given frequently and at stated intervals, at least as often as every three hours. Milk in some form is usually considered the best food; all authorities recommend its use, either plain, diluted with lime water, vichy, or other carbonated water in the proportion of 1 to 3 or 4 of milk. Or, if milk diluted in this way is not digested, then it may be pre-digested, or may be given as whey, buttermilk or kumyss. Many authors and clinical teachers prescribe milk as the only food for this fever, that runs a course of three to six weeks.

Does milk nourish the patient sufficiently? And to this question I answer, No. Is milk easily digested? And again I say, No. No physician who has ever cared for a case of typhoid fever and has made a daily inspection of the stools, will agree that the digestion of milk is ever completely performed and the perfect assimilation thereof is rare. Undigested flakes, and oftener heavy curds, are seen in the stools, which are loose and very offensive.

Acting upon a suggestion made in a discussion of typhoid fever a year ago, I have modified my plan in feeding typhoid cases, and the results have been most gratifying, after treating over twenty cases by this method.

In typhoid fever, as all will admit, the intestinal tube, from one end to the other, is irritated, congested and inflamed in a large part of its length, and yet, knowing this pathological condition, many—yes, most all—physicians advocate the putting of raw and solid food in this inflamed receptacle.

Most authors recommend milk as the only diet; but milk is a fluid only until it is swallowed. As soon as it reaches the stomach the milk-curdling ferment in the gastric juice makes a solid of it in from three to ten minutes, and the coagulum varies in degree of solidity, depending upon the strength of the ferment and the condition of the gastric juice. The coagulated casein passes as leathery curds into the intestine, which is in a more pathological state than the stomach, and the irritating action is marked along the whole length of the passage.

It is well known that in typhoid fever the juices of the intestine are much altered; that the bile and pancreatic juices

are diminished in amount; and right here, I believe, is a point where auto-intoxication begins, because of the presence of undigested food—milk, for instance, being poured into the intestine in a state of consolidation, acts as an irritant to the ulcerating Peyer's patches, decomposing more and more the farther it goes down the intestinal tube. These cheesy lumps are the culture medium for many forms of bacteria in the intestine, not to speak of the Eberth bacilli.

Where milk is the chief article of diet, and is continued throughout the fever, there is a continued and steady intoxication; resulting in a high fever curve, during the whole course of the disease, and I believe that it is largely due to this plan of feeding.

I think every general practitioner can remember cases in his practice where some slight error of eating, that has produced a slight dyspepsia; has caused the temperature, that has been sticking close to normal, to rise two or three degrees, and until the undigested food has been removed by a cathartic—one that will cause the bile to flow freer and so neutralize the poison generated by the decomposing food in the intestine—the temperature will continue to stay above normal. I have seen this happen frequently, when cases have been fed at the beginning on milk, and the temperature stands between 104° and 105°. I have seen a marked fall by the removing of milk from the diet, giving first laxative waters, and then substituting other foods.

Now, what will we substitute for milk? It is not hard to select a suitable diet nowadays. First and foremost come Liquid Peptinoids, Panopepton (strained), in which rice or barley has been cooked, may be made from beef, chicken or mutton.

Beef juice, prepared by broiling a piece of round, juicy steak until it is done rare, cutting it into strips and squeezing out the juice by means of a metal lemon squeezer (heated) into a heated cup, so that coagulation will not take place. This beef juice may be salted to taste, and will prove an excellent substitute for milk.

Eggnogs, milk slings and all foods containing milk should be tabooed in the feeding of typhoid cases.

Feeding should be as often as every three hours by day, every four hours by night. Distilled or sterile water should be given freely, whether the patient has thirst or not. Water not only allays thirst, but it supplies secretions for all glands of the body; it helps in the elimination of waste products by the way of the kidneys, and it greatly aids free evacuations of the bowels, besides supplying the wasting tissue with sustenance. It should be given at stated intervals, and not at the same time when food is administered.

As to the amount of food to give, of Liquid Peptinoids and Panopepton, a tablespoonful or two may be given at a feeding; broths, 6 or 8 ounces; water, *ad lib.*, or 6 or 8 ounces every two hours, or one and a half to two quarts in 24 hours, if possible.

Instead of alcohol—unless the cases become adynamic—I prefer sweetened coffee—without cream or milk; as a stimulant nothing is better; its effect lasts six or eight hours, while the effect of alcohol passes off in a very short time. The sugar itself is nutritious, and adds and conserves the strength of the patient. Sugar, like starch, is fattening. Cane sugar is much more readily digested than starch, the change taking place in the stomach, while the digestion of the latter takes place in the intestine. The main function of sugar, as found in the blood, is believed to be the production of heat and energy. Less force is required for the digestion of sugar than of starch; hence it is evident that cane sugar is to be preferred to starch or foods containing starch.

What do we gain by this plan of feeding?

First—The patients lose little of their weight.

Second—There is no bloating or tympanitis.

Third—The secretions and excretions remain nearly normal throughout the whole attack.

Fourth—Patients do not become emaciated, as they do when on a milk diet.

Fifth—The tongue remains moist and quite clear.

Sixth—The fever is reduced rapidly and keeps low.

Seventh—The strength is conserved and the patients are able to turn themselves in bed without assistance, during whole attack.

Eighth—The mind remains clear, and there is no delirium.

—*The Leucocyte.*

SEXUAL NEURASTHENIA.

By D. J. McCARTHY, M.D.

Associate in Medicine, Wm. Pepper Clinical Laboratory, University of Pennsylvania

Sexual neurasthenia is a fatigue neurosis, either the result of sexual excess or sexual abuse, or a neurosis dependent on physical or psychical deterioration which is traced in the mind of the patient to some fancied or real perversion or abuse of the sexual function. A large percentage of the cases of sexual neurasthenia coming under the care of the nerve specialist are engrafted on a defective, unstable nervous system. It is, indeed, this defective psychic make-up of such individuals, this lack of

mental equilibrium and inhibitory power which leads to the reckless abuse of the normal sexual function, or the more common perversion of it, excessive masturbation. It is therefore easy to understand how the continued drain on these generative organs leads to a depression in the general physical tone, and secondarily to the worry and introspection which is almost always associated with it.

A normal, healthy body will stand a great deal of sexual drain, provided it be unassociated with worry and mental strain; but just so soon as these elements are added, the loss of flesh and strength and tone rapidly takes place, and by counteracting on each other lead to the physical and mental wrecks we see in the terminal sexual neurasthenic. Given an individual addicted to any of these abuses of the organism, one can almost predict the course of the disease. In the normal sexual act, a lessening of the sexual appetite or vigor, or in the perverted forms an accidental discharge of seminal or prostatic fluid, or perhaps a sequence of nocturnal emissions, is the starting point of the introspection which persists and grows as long as the disease lasts. These accidents will naturally occur when the effects of the sexual drain have become manifest on the physical being; the excessive tissue waste having been thoroughly inaugurated before the mental strain has developed.

The average individual, if the will power be sufficiently strong, will now avoid his primary error, only to find that the over-active glands, in their efforts to get rid of a surplus secretion, have produced nocturnal emissions, involuntary seminal discharges, etc., which to him are retribution for his past sins, and add fuel to the smouldering fire which now bursts forth into flame. The mind, during every spare moment, is directed to the sexual apparatus, only to find a new symptom at each turn. His active life and exercise is dispensed with, that he may brood over his misfortune, and try all the patent nostrums for the return of his lost manhood. The muscles become flabby and weak. The liver, in its turn, fails to take care of the added work, and constipation, with anorexia and nervous dyspepsia, completes the wreck so easily begun. In the meantime he has exhausted all the patent nostrums for the relief of his disease, only to find that the temporary improvement due to the mental impression rapidly disappears, leaving him worse off than when he began.

The advertising doctor is next given a trial, with the same result, and finally, without mind or body or occupation or money, he turns to the nervous dispensary, to find many kindred spirits, when he thought he must be the only one so sorely afflicted.

The patient is usually depressed, with sallow, unhealthy skin,

dilated pupils, flabby muscles, very restless and irritable; and with all the pains and aches and diseases he has ever heard detailed. Headache and backache and tremor are usually present. Lack of concentration of thought which the patient thinks is loss of memory and "giving way of the mind" is characteristic. Slight muscular effort produces fatigue, and an accentuation of the other symptoms. The reflexes are exaggerated, the urine is scanty and throws down a heavy precipitate of phosphates, and not infrequently contains spermatozoa and semen crystals. Constipation is almost invariably present, and a flabby, coated tongue and fetid breath are the external evidences of the perverted digestive functions. Indeed, there are but few, if any, of the bodily tissues performing a strictly normal function in the terminal cases of sexual neurasthenia. The clinical picture of the "essential neurasthenic," a neurasthenia due to mental strain, overwork, etc., etc., does not differ essentially from that given above. Neurasthenia, independent of its cause, follows a distinct clinical type, the course and prognosis depending, of course, on the ease with which the previous errors are abandoned and the disposition of the tissues to regain their normal function. Sexual neurasthenia is more prone, I think, to result in a complete loss of the mental equilibrium (sexual insanity) than the other forms of neurasthenia. This is especially true if the neurasthenic comes from an insane stock. The proportion of cases with this termination is very small indeed.

The treatment of sexual neurasthenia does not differ materially from that of the other forms of neurasthenia. A general elevation of the tone of the entire system, and with it of the exhausted nervous system, is necessary, and best attained by a thorough systematic course of rest treatment in a private hospital or sanitarium. The daily visit of the physician, with the encouragement and reinforcement of the increments of moral tone which comes with the correction of the vicious errors in metabolism, are as necessary as the treatment of the physical being. The bromids, hyoscin, etc., may at first be necessary to control the sexual hyperesthesia, but should be dispensed with as early as possible. Local treatment is usually unsatisfactory, as it tends to keep the patient's mind on the sexual organs, when it should be directed into more normal channels.—*International Medical Magazine*.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, J. FERGUSON, T. M. McMAHON, H. J. HAMILTON,
AND INGERSOLL OLMSTED.

Endocarditis of the Pulmonary Orifice.

A woman, aged 28 years, came into the hospital suffering from acute articular rheumatism, which yielded to salicylate of soda. Three days after the disappearance of the pains and the fall of the temperature, there set in symptoms of general infection. There occurred severe intermittent paroxysms, preceded by a violent chill and followed by profuse sweats at times in the morning, at other times in the evening; cardiac phenomena revealing the development of an endocarditis of the orifice of the pulmonary artery. The diagnosis of infective endocarditis of the pulmonary orifice, pyemic in form, was confirmed by the autopsy. The bacteriological examination revealed varieties of bacilli. One is a pyocyanic bacillus with its typical characteristics. The other three varieties are very similar, and a very close examination is required to distinguish the one from the others.—Translated from *Giornale Internazionale delle Scienze Mediche*, by HARLEY SMITH.

A Septicemic Form of Typhoid Fever Observed in Two Women Recently Confined.

In less than a year, de Grandmaison has had occasion to observe, in the clinic of Dr. Ribemont-Dessaigues, two women, who, after having been confined, one prematurely, the other at term, succumbed, after having shown, during life, the bacillus of Eberth in the blood. In these two cases, besides the presence of the bacillus in the blood, the thermic curve was irregular; the rose-spots were not present; the spleen was not enlarged. The two patients presented the clinical course of a true septicemia. De Grandmaison concludes that in women recently confined, suffering from typhoid fever, the birth creates, through the uterine wound, a way of entrance by which the bacillus of Eberth can get into the circulatory current. It then gives rise to a clinical variety which we may call "Septicemic form of typhoid fever in women recently confined."—Translated from *Giornale Internazionale delle Scienze Mediche*, by HARLEY SMITH.

Diphtheritic Paralysis ; Apnea ; Artificial Respiration ; Cure.

Ebstein (*Deutsche Med. Woch.*) reports *in extenso* the case of a child, ten years of age, who was admitted into the medical clinic at Göttingen on account of paralysis of the palate and tongue, and paresis of the vocal cords five weeks after undergoing a severe attack of diphtheria (which had been treated without antitoxin injections). Almost seven weeks after the onset of the disease the child, who that morning had complained of general lassitude, was suddenly taken with the most violent dyspnea, which soon turned into complete apnea. Artificial respiration was resorted to for five hours, by which time the symptoms improved. Other similar spells occurred at various intervals during a whole week, and required persistent use of artificial respiration extending over periods of ten and a half, thirty-four, eight, and nine hours respectively. The first impulse, of course, had been to ascribe this apneic condition to the presence of accumulated mucus, but such was not the case ; nor could a limited focus of pneumonia at the right base, nor the concomitant mild bronchitis, account for the respiratory trouble. Ebstein holds that a pathological toxin influencing the respiratory centres was the probable cause of the trouble, but is uncertain whether it originated from the long-past diphtheritic infection or the present pneumonic affection. At any rate, the little patient's life was saved by the faithful and persistent use of Sylvester's method.—*The Medical Age*.

Larger Dosage of Anti-toxin.

A recent paper by McCollom, based upon an observation of nearly 8,000 cases, calls attention to certain points which have hitherto received too little attention.

Physicians have heretofore been too cautious in the administration of this remedy, and there are many to-day who would consider 3,000 units a large, and in all cases, a sufficient dose. Observation and experiment, however, have shown that as regards the amount to be used there is almost no limit, the sole aim and indication being to antagonize the diphtheritic poison existing in the system. As to its amount and character in a given case we have no means of deciding, and it becomes necessary to use our remedy freely and without regard to quantity or interval. The numerous reported cases in which from 50,000 to 80,000 units were administered during the course of the sickness—usually with favorable results and with no untoward effects, so far as the serum was concerned, should establish beyond reasonable doubt the innocuousness of the remedy. Another point which the author insists upon, is the prompt administration of antitoxin and before the poison has been

elaborated and disseminated throughout the system. The literature at hand shows that cases thus treated within the first 24 or 48 hours of the disease, recover more promptly and under a much less dosage than those in which the attending physician has hesitated or when the ordinary treatment has proved unavailing.

It is most unfortunate—that a remedy so valuable and in fact necessary, should often be denied the masses on account of its exorbitant price. The price of, say, 20,000 units, is in many cases prohibitive, and it may happen that the case which needs it most may fail to secure the same, unless the attending physician is disposed to cast his bread upon the waters without any very well defined hope that it will return after many days.

It will be difficult to estimate the true value of antitoxin until we are enabled to use it without restriction as regards both the amount and the cost.—*New England Medical Monthly.*

Syphilis and Paresis.

An abstract in the *Quarterly Journal of Inebriety* gives the following significant passage from a paper by Dr. Williams:

Practically 75 per cent. of all cases of general paralysis exhibit proof of primarily syphilitic infection. The history of all cases is the "typical man of the world"—ambitious, fond of society and high living, a light sleeper and a heavy drinker; then come delusions and well-marked paresis. Four cases were noted where syphilitic teeth were prominent, although no history of syphilis could be obtained. Each one had used spirits freely. The pathologic conditions in chronic inebriety, syphilis and paresis are alike. The thickened membrane and meningeal changes are the same. The neurosis which predisposes to insanity, paresis or inebriety may be of syphilitic origin. A history of using alcohol exists in all cases of paresis, and it is significant of contributing causes not yet studied.—*American Medico-Surgical Bulletin.*

Nature of Infection: Contribution to the Knowledge of the Bacterium Coli.—By DR. RADZIEVSKY. (*Zeits. f. Hyg. u. Injkh.*).

These papers deal with the subject of the methods by which pathogenic bacteria produce their injurious effects in the animal organism. It has been generally assumed in recent years that as the bacteria grow they produce, either as secretions or as bi-products of decomposition, certain toxic poisons which act directly upon the animal to produce the pathological symptoms. It has been held by some that in reality the toxic products are rather the result of death and destruction of the bacteria than

of their active growth. In a long series of experiments, described more in detail in the second of the above papers, Radziewsky has endeavored to investigate this question. His most important conclusions are: 1. That a fatal infectious disease is to be divided into two stages. In the first stage the pathological effects are the results of the active multiplication of the bacteria. In the second stage, however, there begins a destruction of the micro-organisms, and the pathological effects upon the animal are produced by the toxic bodies arising from their destruction. 2. The animal that is invaded develops the power of killing and destroying the invading organisms. This power is due to materials present in the body fluids which are derived primarily from the living cells. The destruction of the bacteria takes place partly within the leucocytes, but chiefly outside of the cell bodies in the body fluids.—*Post-Graduate*.

Antitoxin Treatment of Tetanus.

As a result of a careful study of this subject, Moschcowitz (*Annals of Surgery*), appends the following *résumé* to his paper:

All forms of tetanus are caused by the bacillus of Nicolaier; hence the diagnosis rheumatic or idiopathic should have no room in our nosology.

The tetanus toxins appear to have a distinct affinity for the anterior horns of the spinal cord, which may be distinctly recognized by Nissl's method of staining. The cerebrospinal fluid of tetanus patients is more toxic than the blood.

The antitoxin therapy appears to have a distinct beneficial influence upon the course of tetanus.

With the antitoxin treatment the mortality percentage has been reduced from about ninety to forty per cent.

Although the use of the serum is a most important factor in the treatment of tetanus, the other recognized therapeutic measures should not be neglected.—*Therapeutic Gazette*.

THERAPEUTICS.

IN CHARGE OF GRAHAM CHAMBERS AND J. T. FOTHERINGHAM.

Nitrate of Potassium as an Antidote for Snake-bites.

Howard cites cases of persons bitten by rattlesnakes, whom he had cured by the following method: The patient is given, as soon as possible, enormous doses ($\frac{1}{2}$ ounce) of saltpetre, or potassium nitrate, dissolved in water. Wet potassium nitrate is also applied locally. Patients so treated have been known

to continue their work and suffer no inconvenience from the bite, while in the cases where considerable swelling has occurred before the treatment could be administered, rapid amelioration of all the symptoms at once occurred, proceeding to cure within twenty-four hours.—*International Medical Magazine*.

Sore Nipples.

The nipple should be cleaned with a little water, to which has been added a small amount of borax, then apply the following:

R Balsam of Peru.
Tr. of arnica, of each, ℥ ss.
Ol. amygdal. dulcis.
Aqua calcis, of each, ℥ ss.

M. Sig.: Shake well and apply to nipple with camel's-hair brush.—*Medical Summary*.

Bismuth Subgallate in Gonorrhea.

Dr. Dokerchaieff states that he has had brilliant results from the use of bismuth subgallate in both acute and chronic cases.

In the acute cases he first washes out the urethra with a boric-acid solution or a 2 per cent. solution of potassium permanganate. Then he injects the following:

R Bismuthi subgallati,
Pulveris acaciæ, of each, ℥ ij.
Aquæ destil., ℥ iij.

M. Sig.: Use as an injection every two hours and retain the liquid each time for five minutes, and allow it to escape drop by drop.

In the chronic cases the urethra is well irrigated and a bougie made up as follows is introduced:

R Bismuthi subgallati, gr. xx.
Wool-fat, ℥ iiss.
Ceræ albæ (white wax), ℥ ss.

M. Sig.: Insert and lightly massage the penis to bring the mucous membrane in contact with the bougie.—*Journal of the American Medical Association*.

Treatment of Prostatic Tuberculosis.

(Sarda, Toulouse, *Archiv. provincial de Chirurg.*) In treating prostatic tuberculosis by local medication there is little success. Often surgical treatment is not desirable. It is best to incise the perineum in front of the rectum deeply, and then

curette. If an abscess points in the perineum, an incision one finger's breadth anterior to the anus should be made. In tuberculosis of prostate without abscess formation, it is desirable to establish a perineal fistula. If a fistula exists, it should be extended into the prostate. In performing prostatectomy, especially if the seminal vesicles are not to be removed the long incision is recommended.—*The Med. Fortnightly*.

Urotropin in the Treatment of Cystitis.

(Goldberg, *Centralbl. f. mer. Med.*) Sixty cases of cystitis were treated by the writer with urotropin; some were gonorrhoeic and primary cystitis, whilst others were secondary to hypertrophied prostate, disease of central nervous system, stricture, tuberculosis, dilated bladder and nephritis. He maintains that the efficiency of urotropin is independent of the reaction of the urine, and varies very much with the kind of cystitis. In secondary cystitis urotropin cannot *per se*, without treating at the same time the local cause. In infection following secondary cystitis, or in primary urethral infection, urotropin is useless. Goldberg disagrees with Nicolaiers and Gros-gliks; the former claiming that this medicament can be used in many ways in treating urinary disorders, the latter agreeing with the former.

Chronic Bronchitis.

In the majority of cases the derivatives of tar, turpentine and balsams are the most efficient expectorants. They are specially indicated in relaxed conditions of the mucous membranes, with excessive secretion, in combination as follows:

R Ol. terebinthinæ,
Picis liq., aa *m* 20.
Ol. eucalypti, *m* 50.
Bals. tolutani, \mathfrak{z} 1½.
Benzosol, \mathfrak{z} 4.

M. et disp. in caps. No. 60. Sig. One four or five times a day.—*Butler, Med. Standard*.

Ulcers.

R Bromol, gr. xv.
Vasellini, \mathfrak{z} j.

M. Sig. Use as a local application.

Bromol is obtained by pouring an aqueous solution of bromin in an aqueous solution of phenol; a white, clear precipitate results. The crystals are insoluble in water, but very soluble in alcohol and in fatty and volatile oils.—*Phil. Med. Jour.*

OPHTHALMOLOGY AND OTOTOLOGY.

IN CHARGE OF G. STERLING RYERSON, J. T. DUNCAN AND J. O. ORR.

The Earliest Symptoms of Locomotor Ataxia.

C. O. Hawthorne (*Brit. Med. Jour.*) refers to the fact that this disease may show several ocular symptoms, such as the Argyll-Robertson pupil, ocular paralysis, and optic nerve atrophy. He states that a step forward in our knowledge of the disease has been the recognition of the fact that ocular disturbances may precede the evidences of any special lesion. Primary optic atrophy has been known to precede the special symptoms for several years; and it is not unreasonable to presume that the Argyll-Robertson pupil and an ocular paralysis may each have the same chronological relation. If any two of these eye symptoms are associated together, there is an increased likelihood that the diseased process (even in the entire absence of special symptoms) is of the locomotor ataxia order. Hawthorne presents a series of thirty cases which, he considers, support his conclusions. These cases point to the fact that affections of the eye are often the earliest symptoms of locomotor ataxia.

Recent Methods of Treatment for Trachoma (Granular Lids).

Hans Adler (*Weiner, Medizin, Presse*) says trachoma is undoubtedly of bacterial origin, although the bacillus has not yet been isolated. Passing over his remarks upon preventive treatment, the author divides the treatment into three groups—1, medical; 2, mechanical; 3, operative.

1. *Medical Treatment.*—He mentions here carbolic acid 2 per cent, ichthyol, pyoktanin, iodoform, creolin B, naphthol, resorcin, but favors corrosive sublimate 1-5000 to 1-1000 as the most effective.

2. *Mechanical Treatment.*—Rubbing the conjunctiva with a swab saturated with corrosive sublimate solution 1-7000 is often effective. The treatment by galvano-cautery is also favorably spoken of. Under cocaine the operation is almost painless, and can be done without an assistant. The after treatment with copper is very efficient.

3. *Surgical Treatment.*—Excision is mentioned, the use of Schroeder's metal brush, and the bristle brush of Abadie. But the squeezing of the granules out by Knapp's roller forceps is spoken of as one of the best methods.

After mentioning all these remedies, Adler concludes by speaking of the old remedy, *lapis divinus* (made by fusing together 32 parts each of copper sulphate, potassium nitrate, and alum; then adding to the mixture 2 parts each of camphor and alum), as one of the most important means of treatment, especially if used early.

The Treatment of Burns of the Eye.

W. Campbell Posey (*Ther. Gazette*, Dec., 1900) says that burns of the eye are always serious (even if apparently slight) and demand prompt treatment. The prognosis will depend largely upon the amount of damage which the cornea has suffered. When only the epithelium is affected, a restoration of transparency may be hoped for, but when the corneal tissue has become completely esclerotic, nothing to improve vision can be hoped for, unless a rim of uninvolved cornea may exist, when an iridectomy may be useful.

Lime Burns.—The most frequent burn of the eye is that from lime, and this is the most destructive agent that can be brought into contact with the surface of the eye. When un-slaked lime, even in the smallest quantity, is permitted to remain in the eye, it acts as a most powerful irritant. In larger quantity, it may cause sloughing, and loss of the eye.

Treatment.—At once evert the lids and cleanse every part with oil, for this substance prevents further slaking of the lime. If no oil is at hand, a diluted solution of vinegar should be used freely. If neither oil nor vinegar can be had, wash the parts rapidly and thoroughly with water. Fuchs recommends dropping a concentrated solution of sugar into the eye, since cane sugar forms an insoluble compound with lime.

After the eye has been thoroughly flushed, any solid particles should be removed with a pledget of cotton, and boracic acid lotion (gr. x. ad f. $\frac{3}{4}$ i). Iced compresses, constantly applied until the inflammatory reaction has subsided, are useful. As the iris is likely to be involved, a solution of atropine (gr. iv. at f. $\frac{3}{4}$ i) should be dropped into the eye. Cocaine or a subcutaneous injection of morphine may be used if there is much pain. Subsequently, protection of the eye, with the use of olive or castor oil dropped into it, will best promote the healing process.

Acids—At times, volatile acids are thrown into the eyes by some malicious person. In such cases the eyes are almost always hopelessly lost.

Treatment.—A stream of tepid water or a solution of bicarbonate of soda or of potash (gr. iv. ad f. $\frac{3}{4}$ i), injected over the whole surface of the conjunctiva at once, is to be used. The after treatment is the same as for lime burns.

Burns by Gunpowder.—The difficulty here is to get out the powder grains. The eye must be thoroughly cocanized, and each grain picked out by a cataract needle.

As the tendency of severe injuries to the eye is to produce great prostration, it is necessary that the patient should be kept quiet in bed, and that a supportive treatment should be inaugurated.

J. T. D.

Editorials.

THE LAST ILLNESS OF THE QUEEN.

We have taken the following particulars, concerning the last illness of Queen Victoria, chiefly from the "authoritative account" published in the *British Medical Journal* of January 26th.

The Queen's health had been failing for about twelve months—the symptoms being mainly dyspeptic, with impaired nutrition and insomnia. The thoracic and abdominal organs showed no sign of disease. The dyspepsia was especially marked during her last visit to Balmoral, where she first showed signs of brain fatigue and lost notably in weight. These symptoms continued at Windsor, where, in November and December, slight aphasic symptoms, unattended by any motor paralysis, were first observed.

The Queen suffered unusual fatigue during the journey to Osborne, December 18th, showing symptoms of nervous agitation and restlessness which lasted for two days. After this she improved for a time until January 16th, when symptoms of cerebral exhaustion appeared. On the following day cerebral symptoms were more marked. There was considerable drowsiness and a slight flattening on the right side of the face. From this time partial aphasia and facial paresis were permanent. On the next day the Queen was a little brighter, but on the following day, January 19th, the graver symptoms reappeared and continued with remissions until the end. The heart's action was steadily maintained, the pulse at times evincing increased tension, but being always regular and of normal frequency. The temperature was normal throughout. In the last few hours of life paresis of the pulmonary nerves set in, the heart beating steadily to the end. Beyond the slight facial flattening there was no motor paralysis, and the mind was seldom clouded. Within a few moments of death the Queen recognized the several members of her family.

THE MEDICAL SERVICES AT THE QUEEN'S FUNERAL.

We were under the impression that the medical services had some official status in England, therefore it was that we experienced something like a shock on reading the following in the *British Medical Journal* of February 9th :

" We understand that no officers of the Royal Army Medical Corps, except those with the men, were told off to take part in the Queen's funeral procession. The Director-General of the Army Medical Service had no place in the procession, although the heads of the other departments, for instance the Inspector-General of Ordnance, the Inspector-General of Fortification and some others were assigned places. Moreover Honorary Physicians and Surgeons to the Queen, who rank as Majors-General, were not given places, while A.D.C.'s to the Queen, who are colonels, took part in it. Is it possible that the services of the medical officers during the war in South Africa are forgotten already ? Or has the precedent of the Wolseley-Buller administration, so hostile to our brothers in the army, been followed ? We look for better things of Lord Roberts, who, if rumor speaks truly, has no reason to thank the Wolseleyites, and of whose kindness of heart and interest in medical affairs we have heard much. Let us hope that when the Coronation occurs the head of the Medical Service, as representing not merely the army, but the profession, will receive the honor due to his position.

DOMINION MEDICAL ASSOCIATION.

We are glad to learn from the president-elect of the Dominion Medical Association, Dr. H. H. Chown, of Winnipeg, that our medical friends in Manitoba are very enthusiastic about the meeting which is to be held this year in Winnipeg. Dr. Chown went from Winnipeg to Ottawa to attend the tuberculosis conference, held February 17th and 18th. After the Ottawa meeting, he went to Montreal to see some of the authorities of the Canadian Pacific Railway, with the object of getting the lowest

possible rates for members from the Eastern Provinces who will attend the meeting.

Dr. Chown was assured that the Company would be as liberal as possible, and will give return tickets for a single rate, or, perhaps, less. In addition, the members may go from Winnipeg to any part of Manitoba or the North-West and return for a single rate. Dr. Chown is also making arrangements for a trip to the Pacific Coast and return, for which the rate will be much less than the ordinary single fare. Physicians who expect to attend the meetings, which will be held during the last three days of August, are requested to communicate with the General Secretary, Dr. F. N. G. Starr, of Toronto, who will soon be able to furnish more definite information as to the preparations that have been made by the Local Committee of Arrangements. After leaving Montreal, Dr. Chown came to Toronto and received many assurances that the profession of this city and vicinity would appear in full force at the meeting. The genial President, who, in addition to being as able as he is popular, happens to be an indefatigable worker, and we feel certain that his personal influence alone will do much to make the meeting a pronounced success.

BILL FOR THE TREATMENT OF INEBRIATES.

In the January number of *THE PRACTITIONER* we gave an abstract of the proposed bill for the treatment of inebriates, as well as some extracts regarding the Massachusetts system of probation for drunkards, the system upon which the proposed bill is based. This bill has been under the consideration of the Ontario Government for over twelve months, while the necessity for making provision for this unfortunate class was impressed upon the Ontario Government by a deputation from the Ontario Medical Association as far back as 1894. It was hoped that this bill would have been introduced last session, as it was drafted at the request of the Premier and Provincial Secretary, and was understood to meet with the approval of the Government, and especially as it had been endorsed by the Public Health Committee of the Ontario Medical Association, and by a number of other public bodies, as well as by medical

members of the Legislature. It was a decided disappointment that the Government did not see its way to bring down the bill last session. It was, of course, taken for granted that not having introduced the bill last year, there would be no question about its introduction during the present session. We regret to say that we have no guarantee that this will be done. During an interview a few weeks ago the Hon. J. R. Stratton, Provincial Secretary, stated to a deputation that although the bill met with the approval of members of the Government, the medical members of the "House" and of the Inspectors of Prisons, as well as of the Warden of the Central Prison, nevertheless he could not promise that the bill will be brought down this session.

We are at a loss to account for this tardiness on the part of the Government, in dealing with a question so closely connected with the well-being of the Province, on any other ground than that the importance of the subject has not yet so taken hold of the public mind as to make itself felt to be one of the pressing needs to be dealt with by the Government; and we would ask each individual member of the profession to consider his responsibility towards many who need his helping hand, and to make it his business to bring the matter before his representative in the Ontario Legislature.

As long ago as 1890 the Prison Reform Commission, appointed by the Ontario Government, recommended that provision be made by the Government for the efficient treatment of inebriates. Almost every year since then the attention of the Government has been called to the importance of the question, and of the crying need for action on the part of the Government. It might be supposed by some that the medical profession of the Province, through the Public Health Committee of the Ontario Medical Association, has discharged its obligations in the matter. This committee, to our personal knowledge, has pressed this question upon the Government four times within less than two years. As, however, these efforts have been apparently barren of results, possibly better results would have been attained had the Government been approached indirectly through the constituencies by members of the profession bringing their individual influence to bear upon their representatives in the Local Legislature. This may yet be

done, and if it be done promptly we would not be surprised if the bill should go through before the close of this session.

If we as medical men and as voters can move members of the Legislature, and if members of the Legislature can move the Government, we would surely be most remiss if we did not bring this influence to bear on behalf of this beneficent bill—a bill that promises so much in the way of restoring to useful citizenship hundreds of our unfortunate brethren throughout the Province, many of whom are not only going to destruction themselves but are also dragging down others and involving them in pauperism, vice and crime.

This bill has been printed and copies may be obtained on application by post card or otherwise to the Editor of THE PRACTITIONER, or to Dr. A. M. Rosebrugh, Confederation Life Building, Toronto.

THE CANADA ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS.

That the scientific facts first discovered by Koch in 1882, and which have since become a part of the common faith of physicians regarding the bacterial origin of tuberculosis, its infrequent transmission by heredity, and its curability in a notable percentage of cases, have gradually taken hold of the public mind, was unmistakably illustrated by the conference held on February 14th, in Ottawa, at the invitation of His Excellency, Lord Minto. The profession, as usual the leaders in every sanitary movement, had, in September, 1900, accepted with enthusiasm the idea of an association for fighting tuberculosis, made at the annual meeting of the Canada Medical Association. To give this Association permanent organization was the work of the recent conference. It was not thought desirable by the provisional officers, and executive then appointed, to attempt any lengthy series of papers and discussions, but rather to set forth broadly before the general and professional public the present position of scientific and public thought with regard to the great mortality caused by the disease, and the duty of the Governments, municipalities and public in relation thereto. Thus the first resolution discussed read as follows:

WHEREAS, In view of the general prevalence of tuberculosis in Canada, and of the very high mortality caused by this disease; in consequence of the communicable nature of the disease, and of the constant and continued dangers caused by its chronic and usually prolonged course, during which a patient may infect not only one house, but many other places of temporary or permanent abode; and especially on account of scientific facts going to show the curability as well as the moderately contagious character of the disease in its early stages,

Resolved, That in the opinion of this conference, which represents the Governments and people of every part of Canada, it is the duty of every Government, municipality and individual citizen to adopt organized methods for lessening and preventing the spread of a disease which is causing directly and indirectly at least one-fifth of the total deaths in Canada.

This resolution was introduced in an eloquent address by Sir William Hingston. Previous to this, however, His Excellency had, in a few gracious words, invited the members to the work, and clearly set forth in admirable terms the occasion of their being called together, and the duty of the hour.

The scope of the resolution gave opportunities for a general discussion, which was entered upon by delegates from the far East and still farther West. It was most inspiring to think that over one hundred of the leaders of scientific, social and political thought could so naturally come together, and filled with one common thought create an enthusiasm for a struggle against the insidious foe which, greater than plague and small-pox, has seized upon the aborigines, introduced to a civilization of doubtful advantage and like a canker is eating at the vitals of our industrial communities, and adding to our high-pressure life, pregnant with its neurasthenias and anemias, a danger from which in Canada our rugged and rustic forefathers were largely free.

The second resolution was introduced in an able speech by Dr. Roddick, and read as follows:

WHEREAS, The British North America Act places the duty of legislating, in the matter of municipal health matters, upon the various Provinces of Canada,

Resolved, That this conference does especially urge upon those Governments the enactment of such legislation as will,

(a) Tend to prevent the spread of infection through expectorating in public buildings and conveyances,

(b) Extend the inspection of places where work-people assemble, with a view to improving their ventilation, lighting and general sanitation.

(c) Aid in providing some scheme, such as that placed in the Statutes of Ontario in 1900, whereby organized efforts of the people may be assisted by governmental and municipal aid in providing sanatoria or "Homes," where the curable may be given an opportunity to recover, and the advanced cases cared for with comfort to themselves and with freedom of danger to those in the homes to which they belong.

This presented the subject in its practical aspects, as related to the duties of the provincial and municipal authorities in executing the laws and exercising the powers vested in them.

The scope of the work to be done and its bearing upon the complicated machinery of our modern society were admirably set forth, while it was very properly urged that such steps as are provided for in the Sanatorium Act of the Ontario Legislature be taken up by other provinces and territories.

The third resolution was that :

WHEREAS, The Constitution of the Dominion of Canada especially delegates to the Federal Government general quarantine in matters of the public health, both of men and animals, as well as matters of statistics ; and in view of the fact that in tuberculosis we are dealing with a disease which not only lessens national prosperity through the loss of lives, but also by enormous expenditures through sickness and loss of labor,

Resolved, That it is the view of this conference that in a disease whose influence extends from questions of the inspection of immigrants to that of imported cattle, and affects the output of our farms and our factories, the Federal Government may greatly assist in the fight against tuberculosis by,

(a) Preventing the entrance to the country of tuberculized immigrants, and tuberculized cattle,

(b) Arranging with the Registrars-General of the Provinces for a system of Federal health statistics of deaths,

(c) Establishing a sanatorium in each of several typical Canadian climates, where under careful medical supervision the therapeutic effects of dry or moist, high or low, forest or prairie climates may be scientifically studied, and the results published for the information of the general public,

(d) Arranging with the railway companies to provide special facilities, both as regards conveyances and rates, for the transportation of tuberculized patients to such sanatoria.

This indicated with accuracy the part which the Dominion authorities, by virtue of the Constitution, may be expected to play in this truly national undertaking. In the work of harmonizing the functions of government in a country which has added one newly settled territory after another, it was perhaps to be expected that the political and more purely utilitarian phases of government should have hitherto been the principal concern of our Federal authorities; but it is yearly becoming apparent that as in the federated German States, scientific work has come to play the most important part in the problem of building up a nation and raising it to the highest plane of social, political, and commercial importance. With us in Canada, whilst we are bending our energies to establish agricultural colonies here and there throughout the land, it is not less plain that it is of equal importance to protect and nourish our own naturally virile population.

Having expressed its approval of the scheme for establishing a national association, the conference took up the work of adopting the proposed constitution and of electing officers. With the end in view of keeping in touch with both the profession and the public, two secretaries were appointed, Dr. Richer, of Montreal, who has had much experience in the work of sanatoria, and is an enthusiast in this work of prevention, and the Organizing Secretary, Rev. Dr. C. S. Eby, who has for a year devoted himself with much self-sacrifice to the advancement of the work represented in the Toronto branch of the Association.

Sir James Grant was unanimously elected President, for to him much of the credit of making the Ottawa meeting a success is due.

Dr. B. Small, the active Treasurer of the Canada Medical Association, was chosen Treasurer, while to assist in the work representatives from the different provinces were placed on the Executive.

Strong sub committees were appointed, several prominent laymen—Mr. Edwards, M.P. for Russell, being of all the most enthusiastic—were added to the list.

As set forth in the constitution, the Association is by literature, by lectures and by the activity of the Organizing Secretary in visiting different parts of Canada and creating an interest in the work amongst the profession, legislators and public,

determined to prosecute an active campaign against tuberculosis. Every citizen is interested and is asked to contribute to a membership, which includes life patrons at a fee of \$100.00, life members at a fee of \$50.00 and ordinary members at a fee of \$1.00.

Sufficient success is looked for to set other machinery in motion, and a year hence it is trusted that such a conference on tuberculosis will be held as will bring together in a series of papers the work already accomplished and that which requires to be continued.

HOSPITAL-USE AND ABUSE.

The question of the use and abuse of hospital privileges by certain classes of people is a somewhat complex one. In a general way, we are quite in sympathy with the report that was adopted by the Ontario Medical Association at its last meeting. The report dealt especially with those patients who pay the hospital charge of \$2.80 a week and then receive free attendance, and recommended that only paupers in hospitals should receive free attendance. We are not quite sure that such a rule should be made absolute, and it may be well to consider the matter from another aspect.

Professor Osler, of Baltimore, delivered an able lecture on Hospitals in Troy, New York, November 28th, 1900. We will make a quotation from this address without at present offering any comments on the same. The address was published in the January number of the *Albany Medical Annals*:

"There is a widespread feeling, strongly emphasized in this State, that the charity of many hospitals is abused by persons who could pay, and pay well, for the services of a doctor at home. Undoubtedly this is the case, and the greatest care should be exercised that only deserving persons should receive aid. The question arises, who is a deserving person? We are all agreed upon the poor man, but how about the relatively poor, the clerk or mechanic with a large family? Many conditions arise in which he is a worthy recipient of hospital aid. A daughter with typhoid fever, or a boy with hip-joint disease is much better off in the wards of a hospital than at home, and

it is a good deal better for the profession that the father of the family should pay the hospital two or three dollars a week for the care of his child than that he should take food from the mouths of his little ones to pay a doctor's bill, which at the best could not be in any degree adequate to the services rendered. Take the cases, too, which need special services—the obscure skin disease, obstinate affections of the nervous system, cases requiring delicate operations; a majority of these have already paid a general practitioner a fair fee before applying to hospital. Instead of saying that our charities are abused by such people, I maintain that they are not used enough, and are not sufficiently taken advantage of by the general practitioners. The golden rule in the practice of medicine makes the interest of the patient the first consideration, and so soon as the physician is puzzled, or finds the case to be obscure, or not progressing well, instead of straining a family in straitened circumstances—distraining, I would call it—by a consultant's fee, he should send the patient to a hospital. If the patient can pay something for the accommodation well and good, if not well and good; to help such is the truest form of charity. I am not speaking, remember, of the absolutely poor, but of the relatively poor and the improvident, upon whom sickness comes as a terrible trial. In relieving these people of their obligations to the profession by placing them in more skilful hands, or where the nursing is better, the physician only does his duty, though it may be at a pecuniary loss.”

ONTARIO MEDICAL ASSOCIATION.

The annual meeting of the Ontario Medical Association will be held in Toronto, Wednesday and Thursday, June 19th and 20th. At least such is the present intention of the committees which are making the necessary arrangements. The dates have been chosen with the object of preventing the meeting from clashing with others, especially that of the American Association, which will be held during the first week in June, and that of the Railway Surgeons, which will be held during the second week of the same month.

Dr. Angus McKinnon, of Guelph, the president-elect, during a visit to Toronto in November last, after a consultation with some of the active members of the Association, appointed Dr. H. T. Machell as chairman of the Committee on Papers and Business, and Dr. Bruce L. Riordan, as chairman of the Committee of Arrangements. Dr. Machell's committee has already done a considerable amount of work, and will soon be prepared to issue a provisional programme. At the present time it is expected that there will be at least three leading discussions on the following subjects: Gastric Ulcer, Empyema, Extra Uterine Pregnancy.

A great effort is being made to get members living outside Toronto to take the leading part in the discussions. It is also hoped that the outsiders will furnish a large proportion of the papers which will be read at the meeting. While the meeting of 1900 was in many respects successful; it was thought by many that there was too much "Toronto." It is hoped by the committee that the programme for the next meeting will have an altogether different complexion.

We sincerely hope that the members of the profession in all parts of the province will take a deep and active interest in the meeting. Never was a president elected who commanded to a greater extent the respect and confidence of the profession in Toronto than the presiding officer of this year. We have every reason to think that the same thing might be said with reference to the body of the profession throughout the province. It is due to him and also to the committees, who are using their best endeavors to make the meeting in all respects successful, that members from all sections of Ontario should assist them in a loyal manner. We are glad to know that a large number of the so-called outsiders have been placed on the Committee on Papers and Business. We hope to be able to give further particulars in our next issue.

The Open Air Treatment of Phthisis.

Dr. Thomas Harris, in the *Medical Chronicle* for November, 1900, enters fully into the above subject. He points out that the death rate in Britain from phthisis has been steadily declining for forty years. Forty years ago the death rate was 2.6 per thousand living, whereas it is now only 1.7. Under favorable conditions tubercular disease may become quiescent. He states that, from his own records, in all persons dying over 20 years of age, 39 per cent. showed quiescent tubercle. Also that of a series of 192 cases of undoubted phthisis in his own practice, 10 per cent. seemed to have recovered, and were living active lives. He thinks that it would be more correct to speak of arrest of the disease than cure. Since the days of Hippocrates, residence in suitable climate has formed an important feature in the treatment of the disease. In 1840, Dr. Bodington, of Warwickshire, published a work on the treatment of consumption, which details practically all the points now discussed under the heading of the open air treatment. In 1860 Dr. Blake, of San Francisco, published papers on the same subject. In 1854 Dr. Brehmer began systematically to treat patients at Görbersdorp, on the open air plan. It appears that any bracing, pure air will do for the treatment of phthisis. It should be free from what is called relaxing in its character. The same patients can stand currents and draughts, still by far the larger number do best when protected from such conditions. There should be such shelters as will permit of exercise in bad weather. Elevation does not appear to be a matter of very much importance. The main feature being the purity of the air, and the amount of sunlight. Abundance of fresh air and sunlight is largely preventive of the disease. The death rate from the disease is higher in congested centres, factories and poor barracks than in the rural districts. In addition to the open air, abundance of good food and proper rest and exercise play a most important part. Patients living in the open are able to take a much larger amount of solid food than when housed too closely. This increase in the appetite should be encouraged. During the periods when the temperature rises, it is most irrational to take much exercise. The amount of exercise must be regulated by a close watch over the temperature. No matter

how much good the open air treatment in sanatoria, or at home may do, we must not forget the other and greater question of prevention. All those conditions that tend to cure go to prevent. The great object must never be lost sight of that prevention is better than cure. The dissemination of knowledge on the laws of prevention ought to command the attention of those who are interested in this work.

The Internal Administration of Suprarenal Gland.

In the *International Medical Magazine* for December, 1900, Dr. W. H. Bates, of New York, comments on renal gland given internally. He remarks that the gland should be chewed in the mouth, in order that it may be absorbed before it reaches the stomach. By this means it enters the system very rapidly. In several cases of exophthalmic goitre it has been of decided value. The dose is gr. v. three times a day. The exophthalmos, rapid pulse, and mucous symptoms were greatly benefited after treatment for some months. In acute bronchitis, gr. iii. were placed on the patient's tongue, and slowly swallowed. This dose was given every two hours. The cough, expectoration and râles were lessened at once. In a few minutes, the tightness, pulsation and dryness in the throat disappeared. In bronchial asthma, where there is much congestion of the mucous membrane, relief often comes in five minutes. In congestion of the lungs the relief to the congestion, the cough, the râles, the dyspnea, expectoration and dulness is very prompt. There is nothing known like it. In hemoptysis it has been found of much value. The gland should be chewed. The hemorrhage is speedily stopped. In heart disease a dose of gr. v. is a powerful stimulant. The weak heart action becomes stronger, a high tension pulse becomes softer, and an irregular pulse becomes steadier. When the gland is chewed and slowly swallowed without water, it enters the system quickly and acts directly on the heart muscle, and not through the nervous system. It does not appear to produce any effect when the pulse is normal. In aneurism, along with potassium iodide, cures of this disease have been effected in a short time. In ten minutes after a dose of the suprarenal gland, the swelling of aneurism has been noted to become greatly reduced.

Obituary.

ALFRED MORSON, M.R.C.S., ENG.

Dr. Alfred Morson, of 18 Ulster Street, Toronto, died March 3rd, aged 91. He practised in Ottawa for many years, until sixteen years ago, when he retired from active professional work and came to Toronto.

DR. HENRY OAKE MARTEN.

Dr. Marten, of 629 Lansdowne Avenue, Toronto, died at his home, February 25th. The immediate cause of death was pneumonia, although he had previously been suffering for some time from a serious affection of the esophagus. He came originally from the County of Essex, but had practised in Toronto for several years.

JAMES E. EAKINS, M.B.

Dr. Eakins died at his residence, Belleville, February 14th, after a long illness, aged 50. He received his medical education in the Toronto School of Medicine, and graduated M.B., University of Toronto in 1875. Soon after graduating he commenced practice in Belleville, where he remained until the time of his death. As a general practitioner he was very successful and much respected by his fellow-citizens. He was for many years physician to the Deaf and Dumb Institute of Belleville. We understand that the cause of death was pernicious anemia, from which he had been suffering for more than two years, and through which he was totally incapacitated for work for about fifteen months. He spent the greater part of the summer of 1900 at Mississauga Point, on the Bay of Quinte, east of Belleville, and for a time his symptoms were much improved. During the winter he grew worse, and towards the end sank quite rapidly.

Personals.

Dr. H. Crawford Scadding, of Toronto, will sail for England April 6th.

Dr. James F. W. Ross, of Toronto, sailed from Nassau for Havana March 4th.

Dr. T. B. MacDonald, of Toronto, was married to Miss Marion Macallum, February 19th.

Dr. Wm. W. Sands, of Sunbury, has been appointed census commissioner for Frontenac.

Dr. H. G. Kemp, of Toronto, formerly of Brighton, was married to Mrs. Lloyd Smith, February 19th.

Dr. T. G. Roddick, M.P., of Montreal, came to Toronto February 27th to attend the funeral of Dr. Marten.

Professor Osler, of Baltimore, came to Toronto February 7th to attend the funeral of his brother, Mr. B. B. Osler.

Drs. Graham, Chambers and Walter McKeown have become the editors of the *Dominion Medical Monthly*, of Toronto.

At last accounts Drs. Geo. McDonagh and C. Trow, of Toronto, were enjoying themselves in the Bahama Islands.

Dr. Otto Plaxton, of Parry Sound, was married February 27th to Miss Florence Love. Dr. H. H. Beaton was best man.

Dr. Charles Trow, of Toronto, left February 10th for the West India Islands, where he expects to remain about six weeks.

We learn from the *Canada Lancet* that a Canadian Association has been formed in Cleveland, with Dr. Calvin Shaw (Trin. '98), as first president.

Dr. Perry G. Goldsmith, of Belleville, expects to leave shortly for London and Vienna, where he will spend six months studying the eye, ear, nose and throat.

Dr. J. M. Macdonald, of Acton, has been appointed associate coroner for the County of Halton in the place of Dr. Uren, who has removed from the county.

Dr. J. Gow, of the resident staff of the Toronto General Hospital, has recovered from his severe attack of la grippe, and returned to his work about February 14th.

Dr. Price-Brown, we are glad to say, is being much benefited by his sojourn in the South. He expects to return to Toronto by the first of April.

Dr. Hugh A. McCallum, of London, Ont., who has been doing post-graduate work in London, Eng., during this winter, has passed the examination for the qualification of M.R.C.P. (Lon.).

Dr. Allan Shore, of Toronto, after spending some time in London at post-graduate work, has passed the examination for the double qualification of L.R.C.P. (Lon.), and M.R.C.S. (Eng.).

Dr. Bertram Spencer's many friends have recently had great pleasure in extending their hearty congratulation on the recovery of his wife, who passed through a very serious illness from double pneumonia.

Dr. R. J. Dwyer, of Toronto, is still in London, Eng., devoting his time largely to clinical medicine, especially at the National Epileptic, the Brompton Chest, the Moorefields and Blackfriars' Skin Hospital.

Dr. G. H. McLaren (Trin. '99), a member of the resident staff of Toronto General Hospital, has recovered from his serious attack of pneumonia. He returned to the hospital from his home in Hamilton, February 20th.

At the annual banquet of the Peel Old Boys' Association, held February 19th, in the Temple Cafe, the following physicians were present: Drs. J. W. Peaker, W. C. Heggie, W. H. B. Aikins, J. H. Hamilton and R. B. Orr.

The following physicians were selected by Dr. Roddick to accompany the sealing fleet from St. John's, Newfoundland, on its annual trip up the Labrador Coast: Dr. C. J. Martindale, Dr. W. F. Adams and Dr. E. H. Stafford.

Much sympathy has been expressed by the *confrères* of Dr. Arthur Jukes Johnson, of Toronto, on account of his recent sad bereavement. His youngest daughter died of pneumonia after a short illness of four days, aged four years and nine months.

Dr. R. E. McKibbin (Tor. '95), of Victoria, B.C., spent a few days in Toronto in the early part of February. He had just returned from New York, after spending three months at post-graduate work. After leaving Toronto he returned to his home in Victoria.

The following physicians are members of the Industrial Exhibition Association of Toronto: Drs. J. O. Orr, Adam Lynd, W. H. B. Aikins, Edmund E. King, S. P. May, H. J. Hamilton. At the annual meeting, held February 19th, Dr. J. O. Orr was re-elected a director.

We are glad to hear that our friend, Dr. John E. Pickard (Tor. '85), is well and doing a large practice in Virginia City, Nevada. At the last meeting of the Nevada State Medical Society, held February 1st, Dr. Pickard was elected president for the ensuing year.

We have much pleasure in congratulating Dr. Landerkin, of Hanover, County of Grey, on his appointment to the Dominion Senate. Notwithstanding the fact that the able and genial doctor is a pronounced Grit, he is one of the most popular members of our profession in Canada.

Dr. James Third, of Kingston, had a somewhat serious attack of some obscure form of paralysis February 17th. On the following day his condition being considered very serious, Dr. Stewart, of Montreal, was summoned. After three days he commenced to improve, and we understood at the time of writing that the prospects of recovery are fairly good.

The Canada Lancet states that the action for damages for malpractice against Dr. J. M. Conerty, of Smith's Falls, still drags through the courts. The long defence of this suit, which was instituted more than a year ago, and in which the complainants are penniless, is a genuine hardship for the doctor, who should have both the sympathy and the material support of his medical brethren.

The Hon. Dr. Montague left February 20th for Australia, where he will be the representative of the Independent Order of Foresters. On Monday evening, February 18th, he was entertained at a large banquet in the Temple Building, Toronto. In addition to a large number of prominent men, including many members of the Dominion and Local Legislatures, there were present the following members of the medical profession : Drs. Adams, Clarke, Clouse, Fisher, Ferguson, Fletcher, Forfar, Little, MacMahon, Millman, Oronhyatekha, Toronto ; Dr. Price, M.P.P., Dr. Pyne, M.P.P., and Dr. Ryerson, ex-M.P.P. At the conclusion of the proceedings Mayor Ramsay, of Dunnville, on behalf of Dr. Montague's former constituents in Haldimand, presented him with an illuminated address and a handsome cabinet containing 115 pieces of silver.

Book Reviews.

Obstetrics.—A Manual for Students and Practitioners. By DAVID JAMES EVANS, M.D., Lecturer on Obstetrics and Diseases of Infancy, McGill University, Montreal, Canada; Fellow of the Obstetrical Society, London, England. Series edited by BERN B. GALLAUDET, M.D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, Columbia University, New York; Visiting Surgeon Bellevue Hospital, New York. Lea Brothers & Co., Philadelphia and New York.

This is one of Lea's series of pocket text books. It is intended for students and junior practitioners. In a general way we may say we are not partial to this sort of text book, but we believe this is one of the best of its sort. It covers the subject of obstetrics very well. We would not like to see it replace a larger work in obstetrics for general use, as it hardly contains enough information for the ordinary practitioner. It will, however, be found useful for the student who desires a concise epitome of the subject for examination purposes.

A Text-Book on Practical Obstetrics. By EGBERT H. GRANDIN, M.D., Gynecologist to the Columbus Hospital; Consulting Gynecologist to the French Hospital, with the collaboration of George W. Jarman, M.D., Gynecologist to the Cancer Hospital; Instructor in Gynecology in the Medical Department of the Columbia University. Third edition, revised and enlarged. Illustrated with fifty-two full-page photographic plates, and one hundred and five illustrations in the text. F. A. Davis Company, Publishers, Philadelphia, New York, Chicago.

The fact that three editions of Grandin and Jarman's text-book on practical obstetrics have been published within five years, furnishes convincing proof as to its popularity. The authors are known to be able exponents of the modern views as to practical methods in obstetrics as they are understood in the United States. They have endeavored to produce a treatise essentially practical rather than theoretical. We think that it will be generally admitted that their efforts have been eminently successful. The first chapter deals concisely with the anatomy of the female organs of generation and embryology. Apart from this the writers make no attempt to teach the minutiae of anatomy, physiology, embryology and pathology. While we are not prepared to agree with the authors in every particular, we must say that we admire very much the style of the book, which makes it especially well suited both for students and practitioners. We understand that the work has become very popular in the United States, and has been recommended as a text-book by the authorities of a large number of medical colleges of that country. The authors are practical teachers,

not mere théorists, and have given us a book which will be highly appreciated by those who want solid facts rather than vague theories, concerning the science and art of obstetrics.

Anomalies of Refraction and of the Muscles of the Eye. By F. B. TIFFANY, A.M., M.D., Professor of Ophthalmology and Otology of the University Medical College of Kansas City, Mo., etc.

This book covers much the same ground as Horrington's. It is a well gotten up work of 300 pages. It is an endeavor to make plain to the student and general practitioner the difficult subject of refraction. From the fact that the volume has reached a fourth edition, we may judge that it has secured for itself a good place in public estimation. The genial author has taken every pains to elucidate his subject, using illustrations freely when necessary. Reflection and Refraction of Light, the Anatomy of the Eye with special reference to Accommodation; the various forms of Ametropia are dealt with in turn. Chapter six gives directions in regard to the examination of the eye. The author's remarks on muscular anomalies are characterized by clearness and good judgment. The last chapter is on spectacles, and contains the necessary directions for the taking of measurements in the fitting of glasses. The appendix contains data gathered from the examination of 2,040 school children of Kansas City. The percentages of ametropia are thus given: Irish, 29.87; Swedish, 27.2; Germans, 24.8; Americans, 21.1; Scotch, 20; French, 19.2, and English, 17 per cent. The book will be of great value to any who carefully study it.

A Text-Book upon the Pathogenic Bacteria, for Students of Medicine and Physicians. By JOSEPH MCFARLAND, M.D., Professor of Pathology in the Medico-Chirurgical College, Philadelphia; Pathologist to the Medico-Chirurgical Hospital, Philadelphia; Fellow of the College of Physicians of Philadelphia. With 142 illustrations. Third edition, revised and enlarged. W. B. Saunders & Co., Philadelphia, Pa.

This work gives a concise account of the technical procedure necessary in the study of bacteriology, a brief description of the life-history of the important pathogenic bacteria, and sufficient description of the pathological lesions accompanying the micro-organismal invasions to give an idea of the origin of symptoms and the causes of death. It is not always easy to choose between the pathogenic and the non-pathogenic, but the author has endeavored to describe those bacteria which can be proved to be pathogenic by the lesions or toxins which they engender. The book is an admirable one in all respects, and well suited for both students and practitioners. The price is \$3.25 net, and the Canadian agents are J. A. Carveth & Co., Toronto.

Elements of Clinical Bacteriology for Physicians and Students. By DR. ERNEST LEVY, Professor in the University of Strasburg, I.E., and DR. FELIX KLEMPERER, Private Docent in the University of Strasburg, I.E. Second enlarged and revised edition. Translated by AUGUSTUS A. ESHNER, M.D., Professor of Clinical Medicine in the Philadelphia Polyclinic, Physician to the Philadelphia Hospital, etc. W. B. Saunders, 925 Walnut Street, Philadelphia. Price, \$2.50. Canadian Agents, J. A. Carveth & Co., Toronto, Ontario.

The authors of this excellent book have endeavored to group the results of bacteriological investigation from a clinical point of view. As they have done much original work in both clinical medicine and bacteriology they are especially well qualified for the work they have undertaken. We can recommend the book with confidence to both medical students and general practitioners. Those who read it will get a clearer idea of the nature of infectious diseases and a more intimate knowledge of their prophylaxis diagnosis and treatment. We join with the authors in hoping that this exposition of what bacteriology has accomplished may help to show how useful to the physician in his double capacity of counsellor of the well and coadjutor of the sick are bacteriologic thought and action.

The Medical Alliance of America.

At the regular stated meeting of the Toronto Clinical Society, held in St. George's Hall, Elm Street, Toronto, on the evening of March 6th, 1901, the following resolution was unanimously adopted:

"That the Toronto Clinical Society is of the opinion that the Prospectus sent forth by the so-called Medical Alliance of America, with headquarters in Montreal, is of such a character as to make it very undesirable that any member of the Profession should be associated with the Alliance in any capacity whatever.

It is further resolved that a copy of this resolution be published in the first issue of each of the Toronto medical journals."

The menopause is not a disease; *per se* it is not even a derangement. It is an epoch of life; it is the closing of one chapter, the opening of another.—*Med. Summary.*

The first emancipator of the slaves, John C. Frémont, never received any honor or gratitude from the negro race; a daring soldier and a major-general, he lived in poverty for twenty-five years without a pension; the man who had given a vast realm richer than Golconda to his country, he died, not owning a single foot of ground to leave to his children.—*February Ladies' Home Journal.*

The Canadian Practitioner and Review.

VOL. XXVI.

TORONTO, APRIL, 1901.

NO. 4.

Original Communications.

A CASE OF TIC.*

BY R. D. RUDOLF, M.D., EDIN., M.R.C.P., LOND.

Lecturer in Medicine and Clinical Medicine in Toronto University.

The term Tic means a "jerk" or "twitch," and has been applied to so many different conditions of twitchings that the whole nomenclature of the various forms of the trouble is chaotic. To the French school we owe the credit of producing some order out of this chaos. They group all the tics into four classes, and these classes have been adopted by Dr. Risien Russell in Clifford Allbutt's "System of Medicine" in his admirable summary of the whole subject, of which I have made free use in the following notes. These classes are as follows:

1. Simple Tic, which includes all cases characterized by tic-like movements unaccompanied by psychical manifestations. The case to be presently noted belongs to this class. The condition of habit spasm—in which, as a result of imitation or of irritation, some twitching occurs and persists involuntarily after the cause has ceased—clearly comes under this first heading. One may give as an example of this the blinking of the eyelids, which has commenced during an attack of conjunctivitis and persists for years after the irritation has ceased.

2. Convulsive Tic ("Maladie des Tics convulsifs"), in which, in addition to the motor disturbances, explosive utterances and imperative ideas appear. Russell considers that the condition called the "Jumping Disease of Maine" is of this nature.

3. Co-ordinated Tics.—Here, instead of the ordinary jerking or twitching which characterizes the first two classes, we have

*Read before the Toronto Clinical Society, March 6th, 1901.

more complex and co-ordinate movements, similar to those executed in ordinary life, but differing from them in that they are more or less involuntary. Examples of this class are very commonly met with, and many of them could scarcely be considered diseased states; thus the various attitudes unnecessarily assumed by orators, some of which become characteristic of the men, might fairly be placed under this heading.

The following are a few examples given by different authors. Sinkler records the case "of a girl who when walking would stop, rub the toe of one boot against the calf of the other leg, and then go on as if nothing had happened."

Noir gives descriptions of co-ordinate tics in feeble-minded children. "Among the more common movements in such cases are balancing, jumping, rolling the head from side to side, striking the chest with the chin, and hitting the head or chest with the hand. Dr. Osler considers that the disorder described by Dr. Gee as "head banging" comes also within the same category. He also regards as an exaggerated example of co-ordinated tic, Weir Mitchell's case of a man who, "unless completely at rest in the recumbent posture, would strike his side by a pendulum-like action of his left arm. This movement he repeated about 150 or 160 times a minute in regular order."

4. *Psychical Tic*.—Charcot has said "*Il y a des Tics dans la pensée comme dans le corps*," and the class consists of those cases in which, instead of sudden twitchings and co-ordinate movements of the muscles, there are imperative ideas. These compel the patient to emit certain words or expressions frequently of an obscene nature (*caprolalia*), or to count a certain number before doing something (*arithmomania*). As with the other classes, the sufferers here may be so slightly afflicted as to scarcely be called diseased, or these imperative ideas may be so strong and uncontrollable as to make their lives miserable.

If one should venture to suggest any improvement on the classification of the tics into four groups, it would be in the direction of advising that this fourth class, containing the purely psychical cases, be omitted altogether from the tic group—their nature is so far removed from the primitive idea of twitching or jerking that it would seem simpler to only place in the tic category cases presenting motor symptoms.

Case.—J. B., aged 57, complains of twitchings of the muscles of the face and neck which have lasted about sixteen months. He is a laborer; has been married seven years, and has had no children. His wife has had no miscarriages. Is a very moderate smoker and drinker.

Family History.—Father died of "old age," aged 81. Mother died from the same cause at the age of 78. Three brothers

one alive and well; one died of "heart disease," and the other of a "paralytic stroke." Three sisters alive and well; two died in infancy. There is no history of spasms of the face or elsewhere occurring in any member of the family.

Previous Health.—Patient was a strong man, and is so still, except for the spasms complained of. He has had an easily reducible inguinal hernia since boyhood, dating from a fall he had from a horse at the age of 12. He suffered from influenza 10 years ago, and from inflammation of the lungs 2 years ago. No history of venereal disease.

Present illness began gradually about 16 months ago with involuntary winking of the eyes; he had no disease of the eyes, nor can he give any reason for the onset of the affection. The winking was worse at first when he was walking about, and was nearly absent when sitting or lying down. Some three months later he had a fall from a sleigh, striking the back of his head on the road, but he was only stunned and the twitchings did not seem to have been made worse by the accident.

The twitchings gradually increased. He first came to my clinic at the General Hospital in March, 1900, that is, about six months after the commencement of the illness, when I made the following note: "26 Mar., 1900. Patient is a healthy looking man; every now and then a spasm of both orbicularis palpebrarum muscles comes over him, lasts for a few seconds and passes away. No pain is present at the time. Bright light and walking brings it on. No other symptoms. No soreness of the eyes."

He attended for some weeks, during which time a variety of drugs were tried without any benefit being produced. He then was lost sight of until December last, when he returned decidedly worse; now the spasms were almost constant even when sitting, and they involved most of the muscles of expression. The health was otherwise good. The appetite and bowels were normal.

In the end of January I examined him in detail, and found the condition to be as follows:

Patient is a well nourished man; nothing abnormal discoverable in the muscles below the level of the neck. When sitting quietly with the eyes closed he is pretty steady, but the eyelids twitch slightly in a rhythmical manner at the rate of about 120 per minute. When he tries to open the eyes he partially succeeds, but almost at once a series of spasms of the eyelids, face and neck set in; the eyes are closed firmly and spasmodically, the forehead wrinkles up and relaxes, the condition of *risus sardonicus* is assumed—his jaws clench and his teeth are heard to grate, the strands of the platysmæ, stand out like cords, the

sterno-mastoids are felt to be rigid, and twitch in a clonic manner, as do also the muscles of the back of the neck. The chin is occasionally drawn downwards, and slightly to the right side. The tongue is not affected and no difficulty is experienced in swallowing. If the eyelids be forcibly separated, it is seen that the eyeballs roll about, showing that the extrinsic ocular muscles participate in the condition. When he stands, and especially walks, the spasms are worse, and so close his eyes that he becomes practically blind and has to be led about. His head rotates from side to side, and he endeavors to hold it still with both hands. There appears to be a serous discharge from the nose when the spasms are on, and the saliva seems to increase in amount; as a result of the former the patient continually sniffs, and this symptom appears to be a very constant one in cases of tic.

Dr. R. A. Reive kindly examined the eyes and reported as follows:

JOHN BURCHARD, age 57.

V.O.D. 201 (Hp.) + 1.00, spt. 20 xx +

O.S. 201 xx + 1.25, spt. 20 xx +

Fundus Ocl., normal.

Field " "

Tension " "

Muscular balance, normal.

Slight chronic conj., and slight photophobia.

Have ordered correcting lenses.

The spasms completely cease during sleep; they are very little affected by heat, cold, or light, although it was noticed in March that bright light brought the spasms on. As already stated, they are at their worst when the patient walks about, and are nearly absent when he sits or lies with the eyes closed. When he opens the eyes the spasms set in whether he be in the dark or in the light. By firm pressure on the affected muscles he can slightly control the spasms, but otherwise they are entirely beyond the control of the will. Romberg's sign is absent, but the knee-jerks appear to be gone. There are no sensory symptoms, except occasional pains in the affected muscles, apparently of the nature of cramp. The urine is normal, except that the sp. gr. is slightly low, 1013.

Remarks.—Here we have, then, a typical case of tic, and from the fact that the movements are unaccompanied by any psychical phenomena, and, further, are not of a co-ordinate nature, it is evident that it belongs to the first of the four classes, viz., that of simple tic.

The only two conditions with which it might be confused would be chorea and paramyoclonus multiplex, but the movements are not of choreic nature at all, and in paramyoclonus

A CASE OF TIC.

multiplex they are chiefly confined to the limbs, and are under control of the will, which is not the case in this patient.

The case is unusual in the fact that it has commenced so late in life (at the age of fifty-six). Dr. Sinkler states that he never met a case commencing after the age of thirty-seven.

As regards the causation of simple tic:

1. Heredity seems rarely to play a part, and no such flaw was detected in the present case.

2. The disease chiefly begins in childhood, "nearly 80 per cent. commencing betwixt the ages of five and fifteen years." In our patient, however, it did not begin till the age of fifty-six.

3. Habit is often the cause, the condition originating from some irritation, for example, conjunctivitis, and persisting after the irritation has been removed. No such cause could be here traced.

4. Lowered general health.

5. Reflex irritation.

6. Imitation are all given as causes.

7. Optical defects are frequently associated with the disease. "Of forty-nine cases of Sinkler's Series, which were examined by De Schweinitz and Thomson, errors of refraction were found in forty-one of the patients, in two there was conjunctivitis, and in six there were defects in ocular balance."

In our case there was some hypermyopia, but when one considers the extreme frequency of slight degress of errors in refraction, it is not to be wondered at if they are found in even a large proportion of any series examined. The possibility of a central lesion might be considered, but no other evidence of such is forthcoming, and from the bi-lateral and widely spread distribution of the movements such a cause is rendered very improbable.

If all medicine remedies fail, as they have done so far, and the condition persists in its present acuteness, or becomes worse, some surgical procedure, for example diversion of the nerves, might be indicated, but the chances of this doing good seem small in a case where the movements are present in muscles supplied by so many different nerves.

Note.—28th March, 1901.—For the last six weeks this patient has been taking arsenic in full medicinal doses and he has considerably improved. When sitting still he can keep his eyes open fairly well, but the spasms are still severe upon rising or walking.

TENDON TRANSPLANTING IN PARALYTIC DEFORMITIES.

By CLARENCE L. STARR, M.D.,

Orthopedic Surgeon to Hospital for Sick Children; Demonstrator of Clinical Surgery, Toronto University; Member of American Orthopedic Association.

The treatment of paralytic deformities, until a comparatively recent period, has been by means of mechanical support, and many ingenious forms have been devised to meet the necessities of individual cases. Where any operative treatment has been added, it has been in those long-standing deformities, with contraction of the unopposed muscles. In these, a simple tenotomy of contracted structures has been done, and then the necessary mechanical support applied to prevent relapse. The outlook for sufferers from this class of deformity was not bright, for if the apparatus provided did furnish satisfactory support it must be continued throughout the entire life of the individual.

It is only within the past few years that attempts have been made to correct or prevent deformity, by re-arranging the attachment of the healthy active muscles so that they may act to better mechanical advantage, and thus give the greatest measure of support possible, with the limited muscular activity.

The first surgeon to successfully carry out this principle of treatment was Nicolodani. In 1881 he reports having successfully transplanted the peroneal tendon into the tendo-Achillis. It is, however, due to the work of Goldthwait, of Boston, that this operation is brought more carefully before the surgeons of this country. He reports a large series of cases with very satisfactory results. One cannot claim that the operation will cure, or is applicable in all cases of paralytic deformities, but it certainly is worthy of a large place in the treatment of these cases, for by its use some are completely cured, and in others, it allows of the substitution of a simple form of support for a more complex one.

The operation is clearly indicated in those selected cases where a group of muscles is left unimpaired, while the opposing group is paralyzed. So far the principle of treatment has been chiefly applied to deformities of the foot and leg, and, as from an anatomical standpoint, these are the most favorable for operation, better results may be looked for here than elsewhere. Goldthwait, however, reports the successful transplanting of the sartorius into the quadriceps extensor.

The large number and compact grouping of the muscles of the forearm render operation in this region difficult, but Tubby reports transplantation of pronator radii teres, by raising its

attachment to the periosteum, carrying it through the interosseous membrane, and re-attaching it to the outer surface of the radius, thus changing its action into a supinator. Vulpius, of Heidelberg, also reports some successful cases of operation on the forearm.

The following four cases are reported somewhat in detail to illustrate the methods employed in operation; but, of course, each case must necessarily be a law unto itself.

CASE 1.—A boy five years of age, acute infantile spinal paralysis at two years, with complete paralysis of right limb. There has been gradual recovery of all muscles, except peronei, which remain inactive. In spite of mechanical support the foot slowly assumed a position of marked equino-varus. At the time of operation equinus deformity was slight but varus so marked that patient walked on outer border of foot entirely.

An incision was made along the posterior margin of the subcutaneous surface of the fibula, the peronei tendons exposed, and tendon of peroneus longus isolated. A second incision was made above the ankle just internal to the crest of tibia and the tendon of the tibialis anticus exposed. This was divided subcutaneously on the dorsum of the foot, and pulled out of its sheath. Next it was pushed through subcutaneous tissue superficial to the extensor tendons into the first wound. A slit was then made in peroneal tendon and tibialis tendon drawn through it and secured by two criss-cross sutures of silk. The wounds were closed and foot put up in plaster. Wound healed perfectly and in four weeks plaster was removed and child allowed to walk. Now walks plantigrade, with very little deformity, and can voluntarily evert foot. Boy is in every way improved.

CASE 2.—Young girl, fourteen years of age, was admitted under my care at the Children's Hospital. She had complete flail condition of left lower extremity, and in right a paralysis of calf muscles, tibialis posticus and flexor longus hallucis, giving foot a position of severe calcaneo-valgus on attempting to bear any weight on the limb.

It was desirable to get a firm base of support in right leg so that a mechanical support might be made use of on the opposite side. An oblique incision was made from above outer malleolus downward and inwards, so as to expose peroneal tendons and tendo-Achillis. After freeing the tendo-Achillis the peroneus brevis was divided, carried under it and attached through a slit to the tendon of the flexor longus hallucis. The peroneus longus was then divided and attached in the same way to the tendo-Achillis. The wound was then closed and plaster applied. Passive motion was commenced in three weeks, and in six weeks patient was able to bear her weight on foot

without it rolling over. Foot developed strength, and now patient is able to walk without crutches, with a support from the perineum on the other limb.

CASE 3.—Young lady aged 18, with well marked valgus deformity, result of infantile paralysis. The shoe was rolled over badly to the inside and walking was very difficult, with stiff awkward gait. The paralysis involved the anterior and posterior tibial muscles. An oblique incision was made over the extensor tendons just above the annular ligament of ankle, and the extensor longus digitorum isolated. Its outer segment and the peroneus tertius tendons were divided, carried over the balance of the extensor tendon and united through a slit to the tibialis anticus. The usual dressing was applied and patient allowed to walk in six weeks. The foot was very much improved, and with the aid of a Whitman spring in the shoe the patient was enabled to walk very well.

CASE 4.—Boy, aged 5, acute attack of polio-myelitis in July, 1899, involving apparently both lower extremities. Right gradually recovered, but the left only partially and foot assumed an equino-varus deformity. On examination January 21st, 1901, the peronei and extensor muscles are found permanently paralyzed, giving no response to faradic current. The anterior and posterior tibial and calf muscles being unopposed, a typical acquired equino-varus deformity resulted. The boy walks altogether on outer surface and dorsum of foot, the plantar surface being turned inward and backward toward opposite foot. There was no power to extend the toes, except the great toe, and foot could not be dorsally flexed on leg.

January 23rd, 1901.—Under anesthetic, a curved incision was made exposing both peronei and Achilles tendons. The peroneus longus was isolated and divided, the distal end pulled strongly so as to correct the varus position of the foot, and then passed through a slit in the tendo-Achillis and held in position by a mattress suture of kangaroo tendon. The superficial wound was closed with horse-hair sutures. An oblique incision was then made on the anterior surface of the leg, just above the annular ligament, exposing tendons of tibialis anticus and common extensor. The tendon of the tibialis anticus was exposed and the common extensor, just as it divides into separate tendons to the toes. A loop was formed of the latter and drawn firmly through a slit in the tibialis anticus, and sutured as before. The extensor tendon was drawn up sufficiently tight to fully correct the equinus before being fastened. The superficial wound was closed and foot put up in plaster.

The wounds healed by primary union, and the foot was removed from the plaster dressing only a few days ago. The time elapsed since operation is not sufficient to form an opinion

of the final result, but at present there is marked improvement in position and in the stability of the foot. The foot can easily be retained at a right angle to the leg. There is some extension of the toes and the walking is very much improved, the plantar surface coming in contact with the floor at every step. The varus deformity is also largely corrected.

My observation of these cases leads to the conclusion that in this way a great deal may be done for this otherwise hopeless class of deformities, and with greater experience much better results may be expected. It is essential that primary healing be secured, else the operation will likely prove useless.

The tendons should be united by a crucial mattress suture of kangaroo tendon preferably. Catgut as a suture is too readily absorbed, and silk, in my opinion, is likely to come out sooner or later.

Motion should not be allowed until about fourth week, as tendons unite slowly. The plan of Goldthwait, of dividing the paralyzed tendons and inserting them into the active ones, is probably preferable to the opposite plan, as pursued in first three cases described.

A COMPARISON OF ANTISEPTICS.

By E. RALPH HOOPER, B.A., M.B.,

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Notwithstanding the patient investigations of the numerous bacteriologists in Europe and America, and the clinical observation of surgeons throughout the world, there still exists much contradictory evidence as to the relative merits of our principal germicides. This discrepancy of opinion is owing to at least three causes: (1) faulty methods of research; (2) an inequality in the conditions of experiment, and (3) a variation in the virulence of bacteria. The question of the value of antiseptics will always remain an earnest one till the researches of the bacteriologist, and the clinical experiences of physician and surgeon, have agreed upon the superiority of each agent in that department of germ destruction in which it is best adapted.

With a desire of crystallizing the results of investigation, the State Board of Health of Maine a few years ago published a report of the literature on this subject. From that report the following notes are written in the hope that a brief account of the uses of the more important germicides will be of practical value. As the report is selected from the researches of the

most eminent authorities, it must be looked upon as the expression of reliable evidence, and therefore possessing much weight.

Alcohol.—The experiments to determine the disinfectant and antiseptic value of alcohol, and the conditions under which its use is, or is not, successful, have given rise to diverse conclusions.

Reinicke, Ahlfeld and Epstein in an extended series of investigations, agree that the most important condition favoring the action of alcohol is the presence of moisture. It is, moreover, a valuable auxiliary as Epstein's conclusions, as follows, clearly show:

"That absolute alcohol has no disinfecting power; that 50 per cent. alcohol disinfects better than higher or lower concentrations; that antiseptics which have more or less efficiency as aqueous solutions lose their disinfecting properties when dissolved in high grade alcohol, but that on the other hand, solutions of sublimate, carbolic acid, lysol and thymol have a higher power of disinfection in 50 per cent. alcohol than solutions of the same concentrations in water have." In itself alcohol has not valuable antiseptic qualities, but is useful in that it enhances the antiseptic properties of other agents.

Some writers have suggested that the antiseptic action of alcohol, when used to disinfect the hand, is purely a mechanical one, contracting the skin, and thus temporarily sealing up the bacteria during that period in which their presence would be injurious.

Anytin is a coal-tar derivative and is entitled to consideration in that it intensifies the action of other antiseptics and possesses a neutralizing action on the diphtheria toxin.

The solution of anytin is spoken of as anytol. It has been found that a one-half per cent. solution of cresol-anytol acts as vigorously as a 2 per cent. carbolic acid. A 5 per cent. cresol-anytol killed anthrax spores in forty hours, while the same strength of carbolic acid solution allowed a vigorous growth of anthrax spores. The 3 per cent. cresol-anytol solution is recommended for the disinfection of the hands. Hands were thoroughly rubbed with the culture of *Staphylococcus* in bouillon, then after Fürbringer's method, brushed with soap and warm water one minute; washed one minute with alcohol; immersed in a 1 per cent. cresol-anytol solution for one minute, and finally rinsed in sterilized water. Even with the 1 per cent. solution the hands were rendered sterile as far as *Staphylococcus* are concerned.

Boiling.—This convenient method is found to destroy in a very few minutes, most disease germs at a point considerably below boiling. Cholera spirillum was killed at a temperature

of 125°F. in four minutes; Typhoid bacillus at 139° in ten minutes; Staphylococcus pyogenes aureus at 136.4° in ten minutes.

In a comparison of boiling water and steam the former has a distinct advantage in that it more readily absorbs moisture and thus destroys the vitality of the bacteria. The same volume of steam contains 1,700 times fewer molecules of water. Another obstacle which steam encounters in penetrating bacteria is undoubtedly a coating of minute air bubbles adherent to the germs.

Plunged into water air has a tendency to rise to the surface. This is due to the great difference in the specific gravity of air and water. The difference at 100°C. is about 1:1,000, with steam it is only 3:5. The steam is deprived therefore of this valuable aid in freeing the bacteria from air bubbles.

Carbolic Acid.—This agent is so universally relied on and adhered to by the medical profession that it is well to be aware of its limitations.

Koch says that for the destruction of anthrax spores a 3 per cent. solution must act seven days.

The especial advantage possessed by carbolic is due to the fact that its action is not materially influenced by the presence of acids, alkalies, salts or albumen. In solutions free from the foregoing substances, carbolic acid is much weaker than corrosive sublimate. Uffelman's experiments proving that a 5 per cent. solution of carbolic acid failed to destroy typhoid bacilla in one hour, does not tend to increase confidence in carbolic acid. The most interesting and useful fact about carbolic acid is that certain auxiliaries greatly increase its potency.

A 2 per cent. of crude carbolic acid with 1 per cent. of pure hydrochloric acid, destroyed anthrax spores in seven days, the same per cent. of these solutions separately did not destroy these spores in thirty days. Dr. Scheurlen, in a paper on the molecular conditions of aqueous solutions of disinfectants, as regards their efficiency, states that a 1 per cent. solution of carbolic acid in water failed to destroy Staphylococcus pyogenes aureus in five minutes, but a 1 per cent. solution of carbolic acid with 20 per cent. of common salt, destroyed the same organisms in one minute.

Upon Scheurlen's recommendation certain surgeons have used the one-half per cent. solution of ortho-cresol with 12 per cent. of common salt as a very satisfactory antiseptic. The rusting of instruments in it can be prevented by the addition of 1:1,000 of hyposulphite of soda.

It is well to emphasize Koch's statement and Lenti's confirmation that carbolic acid in olive oil or absolute alcohol has no effect whatever.

Comparison of carbolic acid with other coal-tar derivatives.—Various other coal-tar products have been recommended as substitutes for carbolic acid.

Cresol is obtained from crude carbolic acid. Gruber, Behring, Buttersack and others concede a higher disinfecting value to cresol than to carbolic acid, and Grigorjeff's experiments prove that the cresol is four times less toxic than the carbolic acid.

Lysol consists of neutral soap, water and cresols. It is undoubtedly a better disinfectant than carbolic acid and is also cheaper. Gruber found that a 2 per cent. solution of lysol destroyed the *Staphylococcus* of suppuration as readily as a 3 per cent. solution of carbolic acid.

In Martin's clinic in Berlin, the statistical showing was more favorable after the use of lysol than after that of carbolic acid.

Gerlack, in speaking of its advantages in surgical practice, says that lysol is more efficient than carbolic acid; that the disinfection of the hands is assured by using a 1 per cent. solution without the previous use of soap; that a one-fourth per cent. renders instruments sterile and does not attack the instruments; and that it is eight times less poisonous than carbolic acid, and much less so than corrosive sublimate. The one disadvantage of lysol, namely, rendering the hands and instruments slippery, can be overcome by subsequent washing in sterilized water.

Creolin, an emulsion of the cresols of crude carbolic acid in a solution of hard soap. Creolin has been used as a surgical antiseptic, but other cresol preparations are far superior to it. Its superiority to carbolic acid is doubtful and its toxicity is not as mild as has been claimed for it. When placed in solutions of water the creolin becomes precipitated and an opaque white solution results. This is very inconvenient in surgical work, as it obscures the field of operation.

Solveol is a preparation of cresol held in aqueous solution by means of cresotinate of soda. It contains 27 per cent. of cresol and is used principally as a surgical antiseptic. It forms clear and perfectly neutral solutions in water; solutions of the same strength are twenty times less poisonous and much less caustic than those of carbolic acid; its solutions do not roughen the hands as corrosive sublimate does, nor benumb them as carbolic acid does, nor render them slippery as lysol does, nor obscure the field of operation as the precipitate of creolin does; its odor is less persistent than that of carbolic acid; diluted with calcareous waters precipitates are not formed as with corrosive sublimate and lysol.

It speaks most favorably for solveol that Hammer found .5 per cent. of solveol to act more energetically than a 2.5 per cent. solution of creolin, lysol and carbolic acid.

Hillier considers it the most desirable antiseptic that has come to his hands. An extended experience in obstetrics and gynecologic work has not developed a fact to throw doubt on the efficient and energetic power of solveol.

Solutol is a cresol preparation for general disinfection in which cresol is rendered soluble by the addition of cresol-alkaline. Solutol penetrates very rapidly into the interior of masses of matter and has a great facility for dissolving blood coagula.

In solutol the germicidal effect of the cresol is increased by the strong alkaline reaction of the preparation and is well suited for gross disinfection.

Formaldehyde.—The uses of this antiseptic are too numerous and the results of experiments too unsettled to discuss its uses at any length in the limited space at our disposal.

It may be permitted to refer to the work of Dr. Edward Martin, of Philadelphia, in regard to the value of formaldehyde in disinfecting instruments.

Exposure of instruments to formaldehyde vapor given off by paraform in a closed box at ordinary room temperature proved absolutely efficacious.

Catheters new and old, and these dipped in material infected with pure culture of *Staphylococcus pyogenes aureus* or colon bacillus and had not been washed, were rendered absolutely sterile. This was proved in upwards of a hundred experiments.

Iodoform.—The question of the antiseptic power of iodoform has called out much discussion. The favorable results derived from surgical practice has not been confirmed by the results obtained by many of the bacteriologists. Some light has been thrown upon the rationale of the antiseptic and therapeutic action of iodoform by the work of some of the investigators. Behring, in writing, says that iodoform exerts its antiseptic action, only when it is decomposed and that from a surgical point of view this is a fortunate peculiarity of this agent. Bacteria which have strong reducing characteristics decompose iodoform and render it active. Iodoform therefore is an antiseptic agent in the true sense of the word.

Iodoform applied to wounds reduces the amount of secretions, increase the diapedesis of the white corpuscles, and does not diminish their vitality as shown by their ameboid movement. It may be stated, therefore, that the natural course of infection in a wound may be hindered by iodoform in three ways: by limiting the development of the microbes; by lessening their virulence; and by neutralizing their toxins.

Light.—In the study of the available means of destroying infection, light and particularly direct sunlight should not be forgotten. The researches of recent years have shown that sunshine has a degree of germicidal value; and the bacteriolo-

gist who is not mindful of this fact may obtain very misleading results.

Without entering upon a discussion of the theories of the action of sunlight it may be briefly stated that it is probably due to two influences: one a change in the culture media and the second due to the formation of hydrogen peroxide.

Mercuric Chloride.—The suitability or unsuitability of corrosive sublimate for certain disinfecting purposes is a question which has been widely discussed.

The inability of 1:1,000 solution to destroy *Staphylococcus aureus* in less than twenty-three hours is very unfavorable evidence against the sublimate.

McClintock, after a series of experiments is forced to the conclusion that the germicidal power of solutions of sublimate has been enormously over-estimated. He closes with the following summary:

1. The high rank heretofore given corrosive sublimate as a germicide is without warrant and was based upon faulty experiments.

2. Sublimate forms with cellulose, milk, albuminous bodies, with some part of bacteria probably the envelope a chemical compound that cannot be removed by any amount of washing with water. This sublimate when acting on a germ forms a capsule around it, which for a time protects the germ from the further action of the sublimate.

Three objections exist to mercuric chloride being considered an ideal antiseptic in surgical work. Its great toxicity which requires the greatest care in its use; its precipitation of albuminous material; the tarnishing of instruments. A fourth may be added, that of roughening the hands.

Antiseptic Soap.—To Dr. Charles T. McClintock we are indebted for the results of thousands of experiments performed, to make antiseptic soap in which mercurial salts remain in an active form and undecomposed.

A solution of the double salt of mercury and potassium iodide was found to permit the presence of a weak alkali without the precipitation of albumen. If too little alkali is used the metals are attacked, if too much, the mercury is precipitated.

The following conclusions express well the merits of antiseptic soap:

1. In proportion to the amount of antiseptics contained, this soap is at least four times stronger than any known germicide. A 1 per cent. solution of the soap 1:5,000 of mercuric iodide, is at least equal to 1:1,000 of mercuric chloride.

2. It does not coagulate albumens or attack nicked or steeled instruments.

3. It does not attack lead pipes nor silver and aluminum instruments.

A solution containing one-fourth per cent. of soap or 1 : 2,000 of mercuric iodide has to its credit the destruction of *Staphylococcus* in one minute.

Space does not permit more than the naming of other agents used in antiseptic work. The iodine trichlorid, the silver salts, the nitrate, the lactate of silver (actol), citrate of silver (itrol), and protargol. phenosalyl, permangates, etc.

In the foregoing antiseptics described, reference has been made, mainly, to their uses in surgical work and their ability to destroy pathogenic bacteria and that *bête noire* of the surgeon and sterilizer, the anthrax spore.

CLINICAL EXPERIENCES WITH CHLORETONE AND MERCUROL.

BY C. E. DARCHE, M.D., C.M., THREE RIVERS, QUE.

I have been using these two valuable remedies for a year or more with such gratifying results that I feel it my duty to report some of my experiences.

One night last winter I was called to a case of midwifery. The patient, a primipara, aged 20, had been in labor for nearly twenty-four hours. Examination revealed a rigid os, and concluding that the progress of the case would necessarily be tedious, I considered this an excellent opportunity to make a useful experiment. Having with me a small vial of three-grain chloretone tablets, I began to administer two of these every hour, for the purpose of testing the general anesthetic effect of the drug. After eighteen grains had been given, I decided to resort to chloroform anesthesia; the cervix was artificially dilated and delivery accomplished with the forceps. Although in this case I did not procure the general anesthetic effect of chloretone, I observed that it was necessary to use but a very small amount of chloroform to produce anesthesia, and the patient reacted without nausea and vomiting.

In the case of a large epitheliomatous ulceration of the face, I made local applications of a one per cent. solution in the form of a spray, and found it to be a very valuable antiseptic and deodorant. One day it so happened that, being out of chloretone, I was obliged to treat the ulcer with another antiseptic, which was used for about a week. During that week pus was formed in greater quantity and the odor became almost intolerable, but as soon as the chloretone solution was resorted to again, the quantity of pus diminished and the odor almost

entirely disappeared, circumstances which I attribute entirely to the good offices of chloretonone.

The chief use I make of this drug is in an ointment, in which it is sometimes associated with mercuriol, and often with boric acid, with exceedingly good results. In November, 1900, I had a case of extensive ulcers of the legs, and over the back, in a two-year old child that was somewhat rachitic. The case had been treated in various ways, and different ointments had been used with no success. I at once prescribed the following:

Pulv. Amyli.	
Zinci Oxidi.....	aa 3 ii.
Mercuriolis	gr xv.
Chloretoni	3 ss.
Petrolati	3 i.

M. et ft. ung. Sig.: To be applied on pieces of lint, constantly re-covering the affected areas.

Prior to the application of this ointment, the pain in the ulcers had been intense and the itching intolerable; the child constantly scratched himself and was very restless at night. When this ointment was applied, the relief was almost immediate, the child began to sleep better, he ceased to scratch his sores, and he became less irritable. Of course, the underlying condition was treated as well. The mother, who was somewhat skeptical as to the value of the chloretonone ointment, suspended its use for one night, to her sorrow, for the child was very restless and appeared to be suffering. It was reapplied the next day, and under its soothing influence the ulcers healed in a surprisingly short time.

In December, 1900, a man came to my office suffering with ulcerated hemorrhoids, and stated that he wanted nothing but a palliative treatment. Accordingly, I prescribed the following ointment, which gave him almost immediate relief.

R Mercuriolis.....	gr. v.
Chloretoni	gr. xv.
Acidi Boracici	3 ss.
Petrolati	3 i.

M. et ft. ung. Sig.: To be applied three times daily.

I will refer to yet another case similar to the previous one. A young girl came to me having an ulcer of the rectum. I prescribed for her Parke, Davis & Co.'s Elixir Cascara Sagrada, one fluid drachm to be taken each morning and evening according to circumstances, also the following:

R	Mercurolis	gr. i.
	Chloretoni	gr ii.
	Acidi Boracici	gr. viii.
	Olei Theobromæ	gr. xxx.

M. et suppos. no. i. ft. Sig.: To be inserted at bedtime.

The cure in this case was rapid, and the pain disappeared almost immediately.

I have had two cases of pruritus vulvæ in which the very best results were obtained from the use of an ointment of chloretone with boracic acid. I also had several cases of chronic gonorrhea, in which I used bogies of the following composition with perfect satisfaction.

Mercuriol	1 per cent.
Chloretone.....	2 "
Boracic acid	8 "

For the past six months I have treated all cases of acute gonorrhea in this manner: a 1 per cent. solution of mercuriol is used as an injection, and calcium sulphide is given internally, *ad saturandum*, and nothing else is done. Whether my cases were of a "mild form" or not they nevertheless ran a mild course, lasting not more than three weeks, and in some instances as short as two weeks. One of these patients, whom I saw on the third day, and who had, in addition to a profuse purulent discharge, a temperature of 101 degrees with chills the succeeding night, told me some time afterward that he was cured before his bottle of medicine was empty.

I have come to realize that the combination of mercuriol with chloretone and boracic acid is a very happy one, particularly in the treatment of various acute and chronic affections of the skin and mucous membranes.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, J. FERGUSON, T. M. McMAHON, H. J. HAMILTON,
AND INGERSOLL OLMSTED.

The Treatment of the Drunkard.

Dr. John Wetherill, in the *Alkaloidal Clinic* for March, 1901, contends that drunkards are made, not born. They learn to drink, as people learn to walk, by practice. If you take the histories of drunkards carefully, this will become very clear. The author of the article states that he has taken the histories of 632 drunkards. He has had fourteen years' experience in treating drunkards, during which time he has cured over 3,000.

The patient is given 2 to 20 minims, three times a day, of atropia gr. $\frac{1}{4}$, strychn. nitrate gr. 1, aq. destil \mathfrak{Z} i, cochineal to give a pink color.

He is given three times a day the following in 5 to 15 minim doses: Strychn. nitrate gr. 1, aq. destil \mathfrak{Z} i.

Both mixtures are given hypodermically.

He is given every two hours while awake a teaspoonful of the following: Ext. golden seal fl. \mathfrak{Z} ii, ammon. chloride gr. xxx, aq. destil ad \mathfrak{Z} ii.

For the first six days he is given two heaping tablespoonfuls of Horlick's malted milk in half a glass of hot water, well salted. This should be taken every two hours. The patient may eat anything he wishes.

The patient may carry his own whiskey with him, and use it, but must not frequent places where it is sold. He should only drink what is necessary to keep him up.

If he does not stop drinking by the fourth day he is given hypodermically apomorphia gr. $\frac{1}{16}$ in 15 minims of the atropia solution.

This is to create the impression that he cannot drink any more. The whole secret of success is psychic. The patient must be induced to quit thinking about drink. If he begins thinking drink, his desire for it will return. His whole mind must be educated to think something else than drink.

The Treatment of Rheumatism.

Dr. Frank J. Charteris, of Glasgow, in the *Medical Brief* for April, 1901, attaches very high value to the free use of the salicyl compounds in the treatment of rheumatism.

Twenty grains of the sodium salt may be given in water every two hours. This usually relieves the pain and reduces the temperature in thirty to forty hours. The dose may then be reduced to twenty grains every four hours. In two or three days more, twenty grains a day from this time will suffice. By the end of a week, ten grains, three or four times a day, will be sufficient. It may be well to complete the cure, to change to the salicylate of quinine, which acts as a tonic as well as a remedy for the rheumatism. Of all the applications to the inflamed joints none give as much relief as *olerum gaultheriae*. Of this half a dram to a dram should be gently rubbed into the inflamed joint. The joint should then be covered with lint and gutta percha tissue and cotton wadding. Under this local treatment relief is very rapidly obtained. It is well to remember that drunkards do not bear the salicylates well.

The Origin of LaGrippe.

Felix L. Oswald, M.D., writing in March number of *Health Culture*, maintains that epidemic influenza or grip is a disease of Russian origin. In the hovels of the Northern Russian peasants, a most unsanitary condition of affairs is found to exist. When the cold weather sets in, the small window is closed with rags, or great sod; the door is covered with old blankets; the children, dogs and pigs vie with each other in acts of filth. The drunken peasants hang up their wet clothes and sheepskins to dry. Close to the stove, cabbage and other vegetable substances are placed in boxes and barrels to undergo fermentation. From this state of affairs, catarrhs are bred in great abundance. Coughs and colds are the order of the day. Influenza becomes epidemic, and so does tuberculosis in certain conditions. But influenza does not remain epidemic, it becomes national and then international. The contagion reaches the slums of seaport towns. Like other epidemics it grows in virulence, wherever it is fed by proper fuel. It acquires potency enough to start out on its journey of the world.

The Abortive Treatment of Pneumonia.

Current views in regard to the treatment of pneumonia certainly do not include any means for arresting the pneumonic process at its onset, though the possibility of such intervention as a practical therapeutic measure is now receiving a considerable amount of attention. In a recently reported case attention is called to the amelioration of symptoms secured in a case of pneumonia in a baby nine months of age following the administration of three-quarters of a minim of the tincture of *veratrum viride* combined with a quarter of a minim of the tincture of *aconite* given in a teaspoonful of water every hour, and the

result is described as extremely satisfactory. This new abortive treatment of pneumonia therefore resolves itself upon examination into a recognition of the well-known physiological effects attending the administration of green hellebore and aconite. With regard to green hellebore, it has been very shrewdly remarked that as it is now very little used, it is probable that the glowing accounts of its usefulness which appeared some time since were very much overdrawn. The efficacy of aconite has long been well-known in connection with pneumonia, pleurisy, and certain other grave inflammatory affections, but the warmest supporters of the use of this drug are bound to accept the objection that aconite weakens cardiac contraction, and to admit that even minute doses will sometimes cause the pulse to become unsteady and irregular. In Allbutt's "System of Medicine" the author of the article on Pneumonia, speaking of abortive treatment, says that there is nothing absurd in supposing that this may one day be done, and he points out that at the present time the manifestations of syphilis and ague, of hydrophobia and of diphtheria can be successfully controlled. It is much to be desired that a really safe and reliable abortive treatment could be found, but it certainly does not appear likely that the combination of tincture of veratrum viride and tincture of aconite will commend itself to most medical practitioners as the best solution of the problem.—*Medical Press and Circular*.

Flechsigt's Opium-Bromid Cure for Epilepsy (Ziehen's Modification).

E. Mayer (*Berl. Klin. Woch.*) considers the use of opium and the bromids in the treatment of epilepsy as suggested by Flechsigt, and afterwards modified by Ziehen, of much value. The results by the original method were not favorable in the hands of some clinicians; others reported excellent results. The strict regulation of the diet and the use of the cold water treatment, Mayer finds, give marked improvement in the physical being, and cause a decided improvement in psychical condition. The bromids should be kept up at least a year in order to get the best results.—*International Medical Magazine*.

Heredity in Diabetes Mellitus.

J. H. Pleasants, in the *Johns Hopkins Hospital Bulletin* for December, 1900, reports six cases of diabetes mellitus in a single family, occurring in three generations. That heredity has long been recognized as a factor in this disease, is shown by the fact that the first references to it in the literature were in 1696. In 1798 Storer called attention to what he termed

"mild habitual or family diabètes." Modern writers place heredity incidence at from 27 to 5 per cent., the variation probably being due to the different character of the patients who furnish statistics. He is of the opinion that the importance of heredity in this disease has been underestimated. The disease often occurs in an uncle, aunt, or cousin, while the parents escape. In the same way a grandparent may be diabetic, while the parent escapes. When successive generations are affected there is a tendency for the disease to develop at a progressively earlier age. When more than two members in the same generation are diabetic there is a tendency for the disease to appear at approximately the same period of life. Hereditary diabetes developing in the first two decades of life is often of a severe character, while the cases developing later in life are generally of a mild type. In a certain number of cases the disease has appeared in the children prior to its appearance in the parents. There is frequently a neuropathic tendency in diabetic families. Cases are recorded in which several children were diabetic, while the others suffered from various psychoses. Obesity is often a characteristic of families in which diabetes occurs.—*Medicine*.

Croupous Pneumonia.

I have found hot poultices more agreeable than cold. I would resort to venesection when there is an overloaded right heart with threatening symptoms. Digitalis is reserved for an irregular and flagging heart; codeine in small doses for the relief of pain and delirium; strychnine in increasing doses and alcohol for enfeebled heart action; calomel and saline for constipation or sluggish portal circulation; oxygen gas is commenced at the first sign of cyanosis and in quantity sufficient to relieve; and last, but by all means first, the absolute recumbent posture until resolution is established.—*Bridges, Med. Rec.*

The Origin of Parasitic Diseases.

Dr. D. S. Davies, in *Bristol Med. Jour.* for December, 1900, argues as follows on the etiology of infectious and parasitic diseases:

In the case of every parasitic and infectious disease, the parasite must have been evolved from some free living form. The nematoid intestinal worms possess near allies in the free water-living nematoids, feeding on decomposing organic matter. They must often be taken into the digestive canals of animals, and thus gain many advantages of maintaining their existence. Once the parasitic habit has been acquired, the laws of entrance, exit and migration will determine its future.

The entrance of the parasite is usually simple enough. It finds its way into the alimentary canal, but in some cases the parasites do not remain there, but migrate into some other organ of the body. In the case of the bacillus of enteric fever and the spirillum of cholera, they are both suited to an aquatic life. They can live in water, and from this again find their way back into the human digestive canal.

It does not require a great stretch of the imagination to suppose that such forms were developed in the first place from some aquatic form of organism living free in foul liquids. Some of these become adapted for life in the intestinal canal. They could then be carried from place to place by the discharges from the bowels. It is not at all improbable that the enteric fever bacillus is a modified form of the bacillus *coli communis*.

The law of migration may be illustrated by the human tenia echinococcus, which is peculiar to the dog and the wolf. Ripe sections are discharged on the ground by these animals, and taken into the system by various herbivorous animals. The six-hooked embryo migrates, usually to the liver or some other organ. When this is eaten by the dog or wolf, it takes on a new growth into the mature tenia, or similarly so if taken into the human alimentary canal. In the case of the pentastoma tenioides, they get into the nose of the dogs and wolves, and then into the nostrils of these animals, to again be discharged on the grass, and thence taken into the system by herbivora.

Migration is noted in the large group of vegetable organisms capable of causing the exanthemata. The germ is inhaled, but finds its way through the system to the skin, where it sets up an inflammation and makes its escape in large numbers to spread the infection. This is equally true, whether the germ was inoculated into the skin or drank in milk, as in the case of scarlet fever.

Some of these infesting parasites have only one host, others have two or more. The germs of enteric fever and cholera appear to love only man; and their spread from man to man, and when not in the human body, must depend upon their saprophytic existence. Smallpox has limited powers of spreading to other animals, and this has been turned to man's advantage. In scarlet fever, diphtheria and tubercle we have diseases that have a freer range of life in other animals than man. Plague has very great powers of living in a number of animals, as the rat, mouse, rabbit, monkey, squirrel, marmot, guinea-pig. Koch regards the plague as primarily a rat disease.

The history of the filaria is very interesting. The gnat is the carrier host. In sucking blood from the human body it

takes into its own system the embryonic filariæ. These are then deposited by the gnats in water pools. Whether they gain entrance into the human body from the water, or by the proboscis of the mosquito, is not quite settled. In either case the gnat is necessary to the life of the parasite.

Diseases and Disorders of the Heart and Arteries in Middle and Advanced Life.

Dr. J. Mitchell Bruce, in his Lettsonian Lecture (*Brit. Med. Jour.*, March 9th) enters very carefully into some questions of great importance regarding the heart and arteries.

From the years twenty to forty-five the blood pressure is relatively high. During this period, the blood vessels increase in diameter from the stress of the blood pressure on their elastic walls. During these years the heart is steadily increasing in size at a uniform rate.

At the age of 45, in most cases, very marked changes occur. The arteries continue to increase in circumference and more rapidly than previously; the blood pressure falls, and the heart decreases rather suddenly in size. These three features distinguish the circulation for the next twenty years, or up to sixty-five years of age. This change in the heart is due to lowered arterial pressure, comparative bodily relaxation, loss of vasomotor tone in the splanchnic area, and the existence of chronic diseases.

At sixty-five years of age other changes make their appearance. The decline of circulatory energy and the effects of time on protoplasm have so lowered the activity of the blood supply that a considerable portion of the capillary network disappears. The peripheral resistance is increased, the blood rises, the heart again enlarges, so that by 75 it is as large as at 45. The arteries, during this period, grow wider, thicker and longer; but the cardiac systole is increased to overcome fibroid stents that form in inner and middle coats of the arteries, and the obliteration of so many of the capillaries.

After the age of 40, many of the influences that threaten the heart and arteries with disease and disorder are peculiar to this age.

First we must note that physical exertion plays an important part. Acute and serious strain of the heart and arteries may occur at any age from 40 to 70. When persons of mid-life to 70 perform sudden or violent exertion, such as fast bicycle riding, running to catch a train, quick walk up a hill, the effects may be quite serious. In many cases the heart walls may not be very sound, there may have been attacks of gout, frequent periods of previous over-exertion, or some valvular defect from rheumatism. The safeguard against arterial strain lies in the elasticity.

It is admitted that the nervous system has a very close connection with the heart. Excitement and emotional disturbances tax the circulation. During cerebral activity, the blood pressure rises. Worry, anxiety and suspense may give rise to disorder and disease of the heart and arteries. In advanced life, depressing emotions fall very heavily on the circulation. A life of adventure often causes arterio-sclerosis. Persons who have been of nervous and energetic temperament, and who have been burdened with responsible work, often break down in health with tense pulse, accentuated second sound, enlargement of the heart, polyuria and a trace of albumen. A nervous temperament may drive its subject to overwork in devotion to duty and to the indulgence in alcohol to prop up the system. These in turn injure the vascular system.

Many poisons have a decided influence in the production of diseases of the heart and arteries, such as alcohol, lead, tobacco, tea and coffee.

Then there are the poisons developed within the system. In the latter half of life there is a liability to the formation of the gouty habit. This causes derangements of the liver, gravel, headaches and other diseases and disturbance; but the most important of all is that this condition of nitrogenous waste matter in the system stimulates the vasomotor centre, giving rise to high arterial tension, hypertrophy of the heart and polyuria as an effort is made to wash the *materies morbi* out of the system.

Syphilis is another important factor in the causation of heart and vascular disease. The average at which syphilis usually causes vascular disease is 55, regardless of when contracted.

Acute diseases, as pneumonia, typhoid fever, diphtheria, influenza, rheumatism, septicemia and some others, may work grave mischief in the vascular system. Chronic diseases, as pernicious anemia, exophthalmic goitre, and such like, may also prove serious.

Emphysema, and chronic diseases of the lungs and pleura, give rise frequently to disease on the right side of the heart; while chronic Bright's disease affects the left side. There may be a combination of these factors, as the victim of emphysema or Bright's disease working among lead salts, or indulging unduly in alcoholics.

There is also a condition that may be called the family heart. A number of members of the same family become senile early in the vascular system. At fifty the arteries may show changes, that are often not met with in others until eighty. Their heart and arteries become prematurely old. The vital energy of these tissues is soon exhausted.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES F. W. ROSS, ALBERT A. MACDONALD,
H. C. SCADDING AND K. C. McILWRAITH.

Puerperal Sepsis.

Draghiescu (*Annales de Gyn. et d'Obst.*, Paris, October) says the method of treating puerperal sepsis at Bucharest is by systematic irrigation of the uterus whenever, after delivery, the patient has a chill, temperature of 38 C., and pulse 100. The uterus is then packed with iodoform gauze moistened with a 5 to 10 per cent. solution of phenic acid. The gauze slightly distends the organ and by direct contact cauterizes the surface and promotes uterine contractions. It is renewed twice in twenty-four hours. The patient recovers more rapidly with this than with any other method of treatment, and affections of the adnexa, etc., and phlebitis are much less frequent. The mortality has ranged from .05 to .22 per cent. of all accouchements since this treatment was instituted in 1895. There were 3 deaths, or .13 per cent., of 2,047 deliveries in 1899.—*Jour. A.M.A.*

Treatment of Puerperal Eclampsia.

According to Porak, eclampsia is an auto-intoxication of intestinal origin. He therefore treats it by copious flushing of the bowels, using 30 to 50 litres of tepid, 7 per 1000 salt solution under weak pressure. This irrigation brings at last a discharge of pure bile, and then he desists. Infusion into the blood is also an important aid. He considers the convulsions of reflex origin, and consequently forbids all food or drinks by the stomach, and if obstetrical intervention is necessary, abolishes the reflexes by profound narcosis. Since he has been treating eclampsia on these principles he has had only five die out of forty-seven cases, and two of these deaths could not be attributed to the eclampsia.—*Jour. A. M. A.*

Puerperal Mastitis.

Brouha (*L'Obstétrique*, January, 1900) gives details of a healthy primipara who during at least the last three weeks of her pregnancy carried out most conscientiously the prophylactic treatment advised by Rubeska for the prevention of mammary abrasions and cracks; twice daily she washed the areola and the nipple with warm water and soap, and followed this with a fomentation of the parts, sometimes with alcohol and sometimes with glycerine. The labor supervened at term; the child presented by the breech, but was delivered without

interference; but there was some *post-partum* hemorrhage, causing considerable anemia. The same night there was some fever and a feeling of tension in the breasts. The infant was only once put to one breast. A mastitis developed, although no lesion could be discovered in the breasts; recovery took place. The author finds it difficult to explain how microbes reached the gland tissue, as the infant had not been put to the breast when the first signs of mastitis appeared. He considers that some of the microbes which are normally found in the lactiferous ducts had forced their way through the epithelium and reached the lymphatics; he thinks that the mechanical and chemical means employed to prevent the occurrence of abrasions may have weakened the vitality of the epithelium, and so made easy the entrance of the microbes and perhaps also have increased the virulence of these microbes.—B. M. J.

Treatment of Uterine Hemorrhage by the Local Application of Antipyrin and Salol.

Ostermann (*Deutsche Med. Woch.*, March 29 and April 5) has employed the method introduced by Labadie-Lagrave in thirty cases, with good results. Equal parts of antipyrin and salol are melted together in a test tube and brought to the boiling point, the resulting fluid being of the consistence of thin syrup. A bivalve speculum is introduced, and the cervical and uterine cavities are thoroughly freed from discharge by dry cotton wool on a Playfair's probe. Another probe, also provided with absorbent wool, is then dipped into the hot antipyrin-salol fluid, and the uterine cavity is swabbed out with it three or four times. Labadie-Lagrave, however, uses the fluid after it has cooled down. If the direction of the uterine axis is first determined by the sound, it is unnecessary to employ vulsellum forceps to bring down the cervix. These directions apply only to cases where it is possible to adopt the treatment in the intervals of flooding, the best time being shortly after a period. If the application be made during the hemorrhage, an attempt to cleanse the uterine cavity only aggravates it. It is better in these cases to introduce the fluid at once, after simply cleansing the portio cervicalis. Most of the writer's cases of hemorrhage depended on endometritis with some complication, such as inflammation of the appendages, pelvic peritonitis, old hematocoele, and retroflexion of the uterus, but others were due to subinvolution after abortion or labor, or to the menopause. In about one-fourth of the cases the uterus had been curetted previously, but the antipyrin-salol fluid acts well in cases of fungous endometritis without any previous operative treatment. When applied during flooding, the hemorrhage sometimes ceases at once and does not recur; in other cases several

applications may be required. The treatment is not painful unless the fluid is used very hot. Contra-indications are submucous myomata and malignant growths. The simplicity of the method is a great advantage in the case of anemic and nervous women, where anything resembling an operation, such as curetting or *atmocausis* (the application of steam, superheated or not, to the endometrium, see *Review*, Vol. I., p. 103), is refused.

The active ingredient of the liquid is almost certainly the antipyrin, salol being added chiefly to lower the high melting point of antipyrin and to render the melted mixture more fluid. How it acts as a hemostatic is not known, for its caustic power even when hot is but slight.—*Med. Review*.

Gonorrheal Endocarditis in a Patient Dying in the Puerperium.—*Johns Hopkins Hospital Bulletin*, March, 1901.

This article is written by N. McL. Harris, M.B., Toronto, whose name is familiar in Toronto, and William M. Dabney, M.D. It is a careful account of the clinical symptoms and *post-mortem* findings in a case of puerperal fever.

Briefly stated, the history was as follows: The patient was admitted to the hospital on the twenty-fifth day after her confinement, in an apparently septic condition. The patient's statement was that "on the fourth day of the puerperium she was seized with a chill followed by fever, and, later, sweating; and these symptoms have recurred regularly every day since then. Other symptoms have been headache and general pain in the limbs, nausea and vomiting, the latter at times marked, and almost complete loss of appetite; and for the last few days a rather constant cough accompanied by some pain in the side." The patient died on the following day, having given the doctors time to make a complete clinical examination. There was the clinical evidence of disease of the heart valves. The blood was examined for malarial organisms with negative results. Lochia taken from the uterus showed "in cover-glass specimens an occasional coccus, or in doubtful pairs, but so few in number that it was impossible to say whether they discolored by Gram's method or not. Cultures taken on bouillon, agar plates (2 dilutions), and anaërobic glucose agar, all remained sterile." Media suitable for gonococci were not tried, as the case was considered to be one of ordinary puerperal infection. The perineum was found "practically intact," the uterus apparently normally involuted and slightly retro-posed, cervix slightly torn and adnexa seemingly normal.

We note that clinically there was nothing to distinguish this case from an infection by staphylococcus or streptococcus, and,

indeed, the doctors themselves seemed to have looked on it as being of this nature.

The anatomical diagnosis was as follows: Acute vegetative and ulcerative endocarditis involving aortic, tricuspid and pulmonary artery valves, acute splenic tumor, infarction of spleen, catarrhal cystitis, puerperal uterus.

In sections from the cervix and body of the uterus no bacteria were seen. *Cover-glass preparations* from the valvular vegetations showed numerous cocci, many of which were typical gonococci, and all of which discolored by Gram's method. Cultures taken from (a) aortic vegetations yielded gonococcus, streptococcus pyogenes, bacillus coli communis. (b) Tricuspid vegetations, as in (a) with exception of gonococcus. (c) Splenic infarction, sterile. (d) Heart's blood, bacillus. (e) Bladder, streptococcus pyogenes and bacillus coli communis.

We have extracted this paper at some length, because the relation of the gonococcus to puerperal fever has excited some discussion in obstetrical circles.

The authors state in conclusion that this case is "clearly proven one of undoubted gonorrheal origin." We think this statement should be modified, in view of the presence of streptococci in cultures from the heart valves. We regret that the site of the original infection was not determined. The uterus seems to have shown little, if any, sign of infection. The thanks of the profession are due to Drs. Harris and Dabney for publishing the full notes of this case.

K.C.M.

Eclampsia.

In *Obstetrics* for February, 1901, is a translation of a paper by Stroganoff. The title is "Fifty-Eight Cases of Eclampsia Without a Death." There seems to be some confusion on the paper, and it is difficult for the reader to make out whether these were fifty-eight consecutive cases or not. One of this number rapidly succumbed to lobar pneumonia just after being cured of eclampsia.

The writer defines puerperal eclampsia as an "acute infectious disease which usually runs its course in a few hours, seldom exceeding twenty-four, and still more infrequently exceeding forty-eight hours in duration." The convulsions he considers to be the greatest cause of danger. For their control he uses morphine, followed, if necessary, by chloral. He gives oxygen by inhalation during the convulsion, and forbids the use of chloroform except when operative measures are intended. He urges the delivery of the fetus. He emphasizes the importance of giving liquids during the period of unconsciousness, and of removing all sources of irritation. In regard to the writer's theory of the disease we are referred to another

article. In his treatment there is nothing new to account for his very favorable results. Many remedies have been advocated for the treatment of this disease, many of which are of undoubted value, and we are inclined to think that close attention to each individual case, and careful selection of the method suited to it, will go far to reduce the death rate, and disapprove the omission of eliminative treatment from Dr. Stroganoff's list. In our hands it has been of great service in every case.

OPHTHALMOLOGY AND OTOTOLOGY.

IN CHARGE OF G. STERLING RYERSON, J. T. DUNCAN AND J. O. ORR.

Partial or Complete Loss of Vision, Estimation of the Amount of Injury to the Earning Capacity of the Individual.

H. F. Hansell (*Annals of Ophthalmology*) discusses this question. In endeavoring to answer it, he consulted insurance societies, the Bureau of Pensions, the railroad companies, and many authorities—chiefly German. In regard to the insurance companies, they have no uniform methods of estimating the value of one or both eyes. They simply assume the risk of being called upon to pay sums varying from \$600 to \$1,000 for one, and \$5,000 for both eyes.

The United States Bureau of Pensions, for total blindness of both eyes, pays \$72 per month; for loss of one eye, \$17 per month; for loss of sight of one eye, \$12 per month. Not much information was obtained from the railroad companies. Those engaged in the actual running of trains must have full acuity of one eye, and two-thirds of the other.

Hansell says we may assume that the average man will double his earnings every ten years, so that if he earns \$250 per year from fifteen to twenty-five, he will in the next ten years earn \$500, from thirty-six to forty-five \$1,000, from forty-six to fifty-five \$2,000, and from fifty-six to sixty-five he will earn \$4,000 a year.

Hansell puts forward the theory that the loss of one eye does not often interfere with the earning power of an individual. "In all trades but a few, the men with one eye are as capable as those with two, and the one-eyed man's one eye is worth both eyes of the two-eyed." Therefore, the loss of one eye will not prevent the individual increasing his earnings every ten years as above stated. But when the seeing eye becomes weak, the case is very different. The loss of earning power may be computed by a simple system such as this:

If a man has lost one eye but has vision of $\frac{6}{8}$ in the other, he has full earning power.

If he has but $\frac{6}{12}$ he has 80 per cent. of earning power.

If $\frac{6}{24}$, he has about 50 per cent. of earning power.

If $\frac{6}{60}$ he has about 10 per cent.

Finger counting at one foot means that his earning capacity is gone. The most important conclusions of the article may be thus stated:

Monocular blindness is not incompatible with full earning capacity.

Monocular blindness and weak sight in the remaining eye rapidly diminish the earning power.

The loss of earning power owing to defective vision, may be computed according to a simple system based upon the ratio of the loss of vision to the full earning capacity at any age and in most occupations.

Vernal Conjunctivitis.

Vernal Conjunctivitis (*L. W. Fox, in the Annals of Ophthalmology*) is an interesting article specially because he brings forward a new line of treatment. The disease has other names, such as spring catarrh, summer conjunctivitis, etc. It is a rare disease.

The disease is not seen in cold weather; but, in those liable to it, appears during the first hot days of May or June—it may be, year after year. The symptoms are similar to those of ordinary catarrhal conjunctivitis, but the itching of the eyeballs in vernal conjunctivitis is often excessive, often lasting for weeks, or it may be until the advent of cold weather causes the disease to disappear rapidly—as rapidly as does hay fever.

The affection is not corneal, but is located in the epithelium of the ocular conjunctiva (and conjunctiva of lids—J. T. D.). Many lines of treatment have been tried, most of them with little benefit. "Grattage," however, in the hands of Fox, has been signally successful. The operation is performed by grasping the upper lid along its margin by forceps, rolling it outwards so as to expose successive portions of the retrotareal fold. Each portion is thoroughly scarified, then scrubbed with a brush which has been dipped in a solution of corrosive sublimate, 1 to 500. The parts are washed after the scrubbing with the same solution. The lower lid is treated in the same way. It seems to be unnecessary to treat the ocular conjunctiva.

The opinion is almost universally held that atropin is a more reliable cycloplegic than homatropin. With this opinion E. Jackson (*Annals of Ophthalmology*) does not agree. In his article on "Homatropin" he states that in his last one thousand cases in which he used homatropin, in twenty-two it was

suspected that cycloplegia was not complete. In these atropin was used afterwards, but in only one-seventh of the cases did the refraction noticeably change.

Jackson considers it of special value in children, and claims that if used properly, it is of more value, and is a more reliable cycloplegic than atropin, as ordinarily used.

In regard to the use of it a solution, 1 to 30 or 1 to 40, is employed. A drop is instilled, and the eye kept open for fifteen or twenty seconds. The other eye then receives a drop, and is kept open as before. This is repeated every five minutes for four or six instillations. The dilatation of the pupil is then complete, and the accommodation sufficiently paralyzed to allow refraction to be accomplished satisfactorily. J. T. D.

The Treatment of Chronic Suppurative Inflammation of the Middle Ear.

In the *Therapeutic Gazette* S. MacCuen Smith has an excellent article on the above subject. He first insists upon (1) cleanliness, which is accomplished by the use of hydrogen peroxide, followed by syringing. (2) Clean the tube, and middle ear by Politzeas' bag. (3) Dry the parts carefully, and drop in a solution of silver nitrate (gr. i to iii to $\frac{3}{4}$ i), allowing this to flow down the tube. A few drops are sufficient. (4) This treatment should be repeated twice or thrice weekly, the patient, in the meantime, using the syringe twice or thrice a day at home. If this does not succeed, use the "dry" treatment. (1) Dry the parts well, after syringing. (2) Instil drops, as above. (3) Dust with some powder (as iodoform and boracic acid $\bar{a}\bar{a}$.) (4) Insert a small strip of iodoform gauze. (5) Insert a pledget of cotton, which may be changed as often as necessary. This treatment, to be effective, must be done by the physician himself, repeated as often as he considers advisable. Any disease of the naso-pharynx must be treated, and systemic treatment given, where necessary. J. T. D.

Editorials.

UNIVERSITY OF TORONTO.

There seems to be some doubt as to the reasons for the choice of a name for our provincial university. Although situated in the City of Toronto, it is not, correctly speaking, the University of Toronto. The misnomer has caused frequent discussions in late years, and, although many have thought that there should be a change in the name, no definite action had been taken, previous to the meeting of the Senate held March 28th. After a discussion at that meeting, an informal vote was taken, with the following result: twenty to six were in favor of changing the name from the University of Toronto to the University of Ontario. The Chancellor, Vice-Chancellor and many other prominent members of the Senate favor the change. We understand the Alumni Association will be asked for an expression of opinion on the subject at its next meeting.

ONTARIO MEDICAL ASSOCIATION.

In our last issue we mentioned the fact that the Committee on Papers and Business of the Ontario Medical Association had decided to hold the next meeting June 19th and 20th. The President, Dr. Angus McKinnon, of Guelph, Dr. Machell, Chairman of the Committee on Papers and Business, and Dr. H. C. Parsons, have been corresponding with various members of the Society, and also with some distinguished physicians of the United States. It is expected that Dr. Charles P. Noble, of Philadelphia, and other Americans will read papers. We are asked by the Committee to again request the members living outside of Toronto to communicate with the Secretary as soon as possible, giving the titles of the papers which they are willing to present. As we have before intimated, the three leading discussions will be on the following subjects: Gastric ulcer, empyema, extra-uterine pregnancy. The following gentlemen, with others, are expected to lead or take a prominent part in the discussions: Dr. Edgar, of Hamilton; Dr. Ferguson, of London; and Dr. Garratt, of Kingston.

FREE CONSUMPTIVE HOSPITAL.

It has been felt for many years that one of the most urgent needs for Toronto and vicinity was a hospital for the poor and destitute who are suffering from tuberculosis. After many and prolonged negotiations, the National Sanatorium Association has secured a piece of land admirably adapted for such a hospital. It is situated on the brow of the hill at the head of Bathurst Street, opposite the Convalescent Home, and contains about ten acres of land. The late Dr. J. E. Graham, who took a great interest in the welfare of the consumptive poor, was strongly in favor of the site which has been chosen. We understand that all the physicians connected with the Sanatorium Association highly approve of the choice which has been made, as there is plenty of land well situated, easy of access, and sufficiently well isolated. It has also received the endorsement of Dr. Sheard, the Medical Health Officer, and the Local Board of Health.

We learn from the *Toronto Mail and Empire* that the building plans, prepared three years ago, when the National Sanatorium Association held the option on a site near High Park, are being remodelled and extended to meet the requirements of the new site. As soon as they are completed tenders for the building will be called for, the contracts let, and the construction work started with the least possible delay.

THE CHILDREN'S AID SOCIETY.

One of the best of our city charities is that known as the Children's Aid Society. Its chief objects are : To attend the trial of all children under sixteen years of age in the Police Court, and, by investigation of the home life of the children concerned, to assist the magistrate in determining what is to be done with them ; to receive complaints of alleged cruelty to, or neglect of, children ; to receive children at the Shelter from parents who are unable to control their offspring ; and also (from the truant officers) those who have become confirmed truants and incorrigible, for a short term of kindly but firm

discipline ; to receive children for adoption, and select homes for them ; to co-operate with other institutions for the protection of children. The Society has issued the following circular, signed by J. K. Macdonald, President, and J. Stuart Coleman, Secretary, and addressed to the physicians of Toronto : " Our Society desires to reach every case in the city where a neglected or abused child may need its protection and help. Realizing that this—with a limited number of officers—is an impossibility unless citizens coming in contact with such cases will co-operate with us, we are addressing this circular letter to the physicians of the city asking their co-operation. We believe that physicians in the practice of their profession come into intimate contact with more cases of misery, want, cruelty and abuse among children than perhaps any other body of citizens. We would, therefore, be very much obliged to you if, when you come across any cases where you think children require our protection (either by a warning to parents, or by legal action), you will let us know the same. This may be done either by letter to the Secretary, or by telephoning 911, which is the number of the Society's office telephone."

THE BRIGHT SIDE OF MUD.

There is some virtue in mud after all, although it has been somewhat difficult for the ordinary mud-besprinkled pedestrian to discover where or what it is. We find an editorial article on this subject in the London *Lancet* of December 29th. The writer says : " Of course mud is, roughly speaking, wet dust, and dust is dry mud ; but the evil effects of dust far transcend those of mud. In the dissemination of disease, mud remains comparatively innocent ; but for the behaviour of dust in this respect no words can be too strong. Widely disseminated and inevitably inhaled, dust particles carry and deposit enormous quantities of disease. Its local and comparatively trifling damages, conjunctivitis, pharyngitis, and rhinitis, pale before its evil powers in carrying more formidable disorders. It has recently been shown how summer diarrhea is wont to prevail most where there is most dust, and that it may contain the dried sputum of phthisical patients is only too familiar to us all."

Those who live in certain of the cities and towns in Ontario have good reason to believe that our municipal authorities do not appreciate the dangers to which citizens are exposed from floating dust. Take, for instance, Beverley Street, in Toronto, with its expensive and admirable macadam pavement (so far as macadam pavements go). It sometimes happens when our street-watering machinery is out of joint that this street is exceedingly dusty. Apart from the great discomfort which is produced by the inhalation of dust, there are probably other dangers in connection therewith that we know not of. After all, we must agree with the *Lancet*—mud is infinitely better than dust; even mud on one's shirt-collar is preferable to dust in our nostrils and other portions of our breathing apparatus. The *Lancet* is right when it says that paradoxical as it may sound, mud is clean, at least as compared with dust. We might perhaps, without offending the sensibilities of our city fathers, throw out a gentle hint that clouds of dust on a cold and windy day are no less noxious than those we meet in warmer weather, and consequently the watering cart is as much a necessity in the cold spring months as it is in the dog days of July and August.

APPENDICITIS.

We take the following thoughts from Mr. Southam's article in a recent number of the *Medical Chronicle*:

It would be safe to say that the appendix has attracted more attention during the past ten years than any other portion of the body. Twenty years ago works on medicine and surgery contained nothing about the diseases of the appendix, and clinical teachers were dumb regarding those cases of inflammation now ranged under the heading of appendicitis. It is true that typhlitis and cecitis got an occasional word of attention.

“Contrast the above state of knowledge with that pertaining at the present day. Many a death certificate was given with the word, ‘Peritonitis,’ written therein, whereas it should have been ‘Appendicitis.’ With truer knowledge came truer methods of treatment. How very different the management of a case of appendicitis to-day, from the management of a case of pain in the left iliac fossa, going on to general peritonitis of twenty years ago.

"Our knowledge of this disease is now beginning to settle down into its final and definite form. There are still those who take an extreme view, either on the side of medicine and treat all cases on the expectant plan, or who advocate on the other hand operation in every case. Either position is wrong; but the best opinion now holds a middle way between these extremes. To operate in every case would be as unsound in surgery as not to operate in any case would be unsound in medicine.

"When one recalls to mind the fact that of all cases of appendicitis met with in general practice, about 80 per cent. recover without an operation, there is abundant proof for the position that it is bad surgery to operate on every case. It is quite true that many of these cases are left with a damaged appendix, and of these there may be a good many recurrent attacks. But the point that must be emphasized is that many patients, after the first attack, never have a second. Clearly it would have been wrong to have operated on these cases in the first attack. Some argue that as you do not know that there will not be a second or a third attack, the operation should be done on all occasions. But it is wrong to submit all to a major operation to prevent some recurrent attacks.

"Another fact that must be borne in mind is that with a thorough knowledge of the etiology of appendicitis recurrent attacks in the future may become much less frequent than in the past. The correction of indigestion, constipation, the avoidance of over exertion, and errors in diet will no doubt prevent many a recurrence. One of the great duties of physicians and surgeons in this disease will be along the lines of prophylaxis.

"When the attacks recur at intervals the plain duty of the attendant is to advise the removal of the appendix. This should be done in the interval between attacks, in every case where such selection of time can be made. In a few of these recurrent cases, a cure is effected by nature's efforts by the appendix becoming obliterated and converted into a fibrous cord. In the great majority of recurrent cases, however, sooner or later an abscess forms, which may be localized, or set up general peritonitis. The wisdom of removing the appendix in recurrent cases is therefore manifest. The great question to decide is when to interfere surgically. It may be laid down a

rule, accepted by all, that, after two attacks, others are almost sure to follow, and therefore the appendix should be removed.

“In the case of a first attack, if there remains for some time, after the attack, a painful swelling, or pain on making ordinary exertion, the appendix is almost invariably found diseased on its removal, thereby showing the wisdom of surgical interference in these first attacks, running on into a chronic condition, with tender swelling and discomfort.

“There is still a division of opinion as to the best method of treating a case of appendicitis that has not presented the symptoms calling for an operation. As to local applications some recommend ice, some turpentine stupes, others leeches, and others again hot fomentations. An excellent local treatment is equal parts extract belladonna and glycerine, smeared over the part, and hot fomentations. With regard to opiates it may be said that they can generally be dispensed with. If the pain is severe, there is no objection to their moderate use to relieve the sufferings of the patients, as more good will come from the rest thus obtained, than harm from the masking of symptoms. In some very severe cases, it may do good by lessening peristalsis, and thereby favoring the formation of adhesions. As a rule small doses will suffice. In mild cases, and at the commencement of the attack, a mild aperient is useful. This may be aided by an enema. If the symptoms are very acute from the first, or, if the case has run on for a few days, purgatives should be avoided. The peristalsis induced by their action may break down adhesions that are guarding the peritoneal cavity against infection from pus that may be present, or about to form.

“When an abscess forms it should be opened. The opening should be made over the most prominent part, but as well towards the lateral aspect as possible. The abscess cavity should be gently explored with the finger, the greatest possible care being taken not to break down adhesions. If the appendix is readily found it should be removed, but no prolonged search ought to be made for it. The cavity should be washed out with an irrigator and a large drainage tube placed in it for a few days.

The indications which would lead us to suspect the formation of pus are the continuance of the general symptoms beyond the usual period of five or six days, or if there has been a partial

improvement with a rapid return in the symptoms after the seventh day. If the pulse keeps high, say over 100, there is strong reasons to fear that the case is not going to do well. If a partial fall in the temperature is followed by a sudden rise, the case is serious; and also a sudden fall to normal or sub-normal indicates the rupture of the appendix. In all such cases an opening should be made, when pus will most likely be found. If the abdomen is found to contain pus the irrigation should be thorough, followed by free drainage.

INHERITANCE OF ACQUIRED TENDENCIES.

Very much study has been given to the subject of the inheritance of the peculiarities of the ancestors. It has been accepted now as a working axiom that there are many characteristics of the ancestors that may skip a generation, or more, and then reappear. These characteristics are fixed in the germ-plasm of the species; and, though they may not always appear, they are always potentially present. It is in this way that unexpected peculiarities, or powers, may be found in a person, no trace of such being noted in the near ancestry. These are spoken of as latent powers, or features, and account for instances of atavism, or reversion. The crossing of races tends strongly to bring out these latent ancestral characteristics.

But when one passes to the consideration of acquired characteristics, the ground is not so secure. Many have argued with great energy that acquired characteristics can be transmitted. This has again been as strongly denied. If acquired characteristics cannot be transmitted, then nothing that was not in the first germ-plasm can be passed on from one generation to another. Something less may be, but nothing more can be. By this view the first germ-plasm must have been endowed with every potentiality that any member of the race has yet manifested, or may ever in the future manifest. But there are great difficulties in the way of this theory. Take, for example, the variations due to environment, as in the color of different races. Here the peculiarity appears to have become perfectly fixed, and the germ-plasm of the race has been so modified by the somatoplasm that the color has become a certain feature in

the heredity of the race. If acquired characteristics cannot be transmitted, then every possibility of color, genius, disposition and activities must have been provided for in the first germ-plasm. But it is known and admitted that as a given race advances in civilization, the children are born with greater capacities and mature with larger brains and more comprehensive powers than their remote ancestors.

When one turns to the study of disease, some of the strongest arguments are found for the view that acquired characteristics are inherited. If Weismann is correct, that the somatoplasm does not affect the germ-plasm, and that every potentiality is found in the germ-plasm, how can the inheritance of acquired disease and disease tendencies be explained? It is well recognized in pathology that a certain mode of life produces gout. Several generations of this mode of life fixes the gouty diathesis very firmly in the family history. It becomes then a question of great difficulty to eliminate this gouty tendency; and even though a member of such a family lives in a most appropriate manner, he may not escape. He then has an acquired condition, and one that in the first place acted upon the somatoplasm, has modified the germ-plasm so as to make the diathesis hereditary, even though efforts are made to neutralize this tendency. This line of argument could be pushed much further. All in all, it would appear the acquired characteristics may become hereditary, and this is the view of many eminent scientists.

Scheme Not Feasible.

The plan to amalgamate the Toronto and Trinity Medical Schools, as predicted in the *Mail and Empire* several weeks ago, has practically fallen through. The report of the decision arrived at by the faculty of the Trinity Medical College is ready to be made by Dean Geikie to the chairman of the joint university committee. The Trinity report states briefly that they do not consider the scheme of the proposed amalgamation of the faculties feasible, but that the college is in favor of confederation upon broad lines. The University of Toronto Medical Faculty was also asked to consider the proposed plan, but waited until Trinity had dealt with it. The action of Trinity puts the scheme for amalgamation as far off as ever.—*Mail and Empire*.

Obituary.

MICHAEL LAVELL, M.D.

Dr. Lavell, of Kingston, died February 18th, aged 76. He was well-known for many years as one of the most prominent physicians in Central Canada. He graduated from Jefferson College, Philadelphia, 1853, and became a Licentiate of the Medical Board of Upper Canada in the same year. Shortly after graduating he commenced practice in Kingston. Dr. Lavell was for many years Professor of Obstetrics in Queen's University, was a prominent member of the Ontario Medical Council for nineteen years, and was President in 1874-5. He was appointed Warden of the Provincial Penitentiary in Kingston in 1885, and remained in the position for ten years.

CALEB ELLSWORTH MARTIN, M.D.

Dr. Martin, of Toronto, died after a brief illness at the residence of his son in Seattle, W.T., March 7th, aged 69. Dr. Martin received his medical education at Rolph's School of Medicine, Toronto. After graduating, he went to the United States and served as a surgeon in General Sheridan's cavalry during the Civil war. After returning to Canada he commenced practice in Oshawa, and shortly afterwards removed to Lindsay, from which town he came to Toronto and engaged in general practice about twenty-five years ago. He soon acquired, in the latter city, a large practice and was very popular with his patients. A widow and seven children survive. Three of his sons are practising medicine in Seattle, and one of his daughters is the wife of Dr. Norman Allen, of Toronto.

JOHN DUFF MACDONALD, M.D.

Dr. Macdonald, of Hamilton, died at his home, March 10th, at the advanced age of 82. He received his medical education at Edinburgh, and became a member of the Royal College of Surgeons of Edinburgh when twenty years of age, and at once went into service in the Royal Navy, where he remained about eight years. He came to Canada in 1848 and commenced practice in the town of Perth, and removed to Hamilton in

1854. He was a member of the Ontario Medical Council from 1872 to 1880, and President in 1879-80. He was the chief medical adviser of the Canada Life Insurance Co. for more than forty years. Dr. Macdonald was very successful as a medical practitioner and was highly respected by the profession of Canada. He was an ex-President of the Ontario Medical Association and was a member of the Provincial Board of Health from 1890 to 1900, and for some years was chairman of the Board.

Dr. Allan S. MacDonell, of Rat Portage, died of pneumonia, March 6th, aged 47.

Personals.

Dr. Price-Brown has returned from the Southern States and resumed practice.

Dr. Arthur Jukes Johnson, of Toronto, expects to leave for England some time in May.

Dr. Herbert A. Bruce, of Toronto, has purchased a house on Bloor Street East, and expects to occupy it in May.

Dr. George McDonagh, of Toronto, returned from the West Indies, March 23rd, and resumed practice March 25th.

Dr. Nattress, of Toronto, who recently paid a second visit to the Welland, in St. Catharines, is much improved in health.

We regret to say that the latest reports respecting the condition of Dr. James Third, of Kingston, were not favorable.

Dr. John Marquis, of Brantford, has been appointed surgeon to the Ontario Institute for the Blind, in place of Dr. Sinclair, resigned.

Dr. G. W. O. Dowsley (Tor. '99) has gone to Michipicoten, where he received an appointment as surgeon to a railway and mining company.

Dr. A. W. Tanner is also acting as a surgeon to the Rainy River Railway, and is at present in charge of one of the hospitals at Sturgeon Falls.

We regret much to announce the death of Mrs. Smith, the wife of Dr. G. B. Smith, of Toronto, which occurred after an illness of a few days.

We are glad to report that Dr. Spencer has recovered from his attack of septicemia in the hand, from which he suffered much for nearly three months.

Dr. James F. W. Ross, of Toronto, returned from Havana *via* Galveston, Florida, and New York, March 24th, and resumed practice March 25th.

Dr. Thomas P. Weir, formerly of Toronto, is now one of the surgeons for the Ontario & Rainy River Railway, and has charge of the hospital at Aticokan River.

Dr. V. H. Moore, of Brockville, has been appointed a member of the corporation of the Royal College of Physicians and Surgeons of Kingston, in place of Dr. Lavell, deceased.

Drs. J. T. Fotheringham, W. P. Caven and A. H. Wright, of Toronto, sail from New York for England April 20th. After a short visit to London, Drs. Wright and Caven will go on to the continent.

Dr. John J. MacKenzie, Professor of Pathology and Bacteriology, University of Toronto, sails April 19th for Europe. After spending a few weeks in the medical educational centres of England and Scotland he will go to Vienna, where he expects to remain the greater portion of the summer.

Dr. W. H. Weir (Trin. '97), member of the house staff Toronto General Hospital, '97-'98, has just completed a term of two and a half years as house surgeon at the Lakeside Hospital, Cleveland. He has gone to England for post-graduate work. On his return he will commence practice in Cleveland.

Dr. Donald McGillivray (Tor. '98), member of the house staff Toronto General Hospital, '98-'99, after spending a year and a half in Great Britain and on the Continent engaged in post-graduate work, has returned to Canada. He will take charge of Dr. J. T. Fotheringham's practice during three months while the latter is abroad.

Book Reviews.

Sanity of Mind; a Study of its Conditions and of the Means to its Development and Preservation. BY DAVID F. LINCOLN, M.D. New York and London: G. P. Putnam Sons.

This little work of 170 pages, interestingly written, treats of the nature of mental derangement, degeneracy, education, and social and civic duties.

A Treatise on Mental Diseases; based upon the lecture course at the Johns Hopkins University, 1899, and designed for the use of practitioners and students of medicine. By HENRY J. BERKLEY, M.D., Clinical Professor of Psychiatry, the Johns Hopkins University; Chief Visiting Physician to the City Insane Asylum, Baltimore. With frontispiece, lithographic plates, and illustrations in the text. New York: D. Appleton & Co.

This, without doubt, is the best work in the English language on mental diseases, adapted to the needs of the busy practitioner as well as to those of the student of psychiatry. Part I. deals with the anatomy and histology of the central nervous system, while Part II. deals with the general pathology, and Part III. takes up the various clinical forms of mental diseases, divided into five groups. The chapter on the influence of tropical climates upon neurotic individuals, and psychoses peculiar to tropical regions, is particularly interesting and instructive. This valuable work contains about six hundred pages, with an elaborate and well-classified index.

Studies in the Psychology of Sex. The Evolution of Modesty.—The Phenomena of Sexual Periodicity.—Auto-Erotism. By HAVELOCK ELLIS. 6 $\frac{3}{8}$ x 8 $\frac{1}{2}$ inches. Pages xii-275. Extra cloth, \$2.00, net. Sold only to physicians and lawyers. F. A. Davis Company, Publishers, 1914-16 Cherry St., Philadelphia.

This volume contains three studies, which form the chief part of an investigation into the psychology of sex. The first sketches the main outlines of a complex emotional state, which is of fundamental importance in sexual psychology. The second by bringing together evidence from widely different regions suggests a tentative explanation of facts which are still imperfectly known, and the third attempts to show that even in fields where we assume our knowledge to be adequate, a broader view of the phenomena teaches us to suspend judgment and to adopt a more cautious attitude. The three main divisions are: The Evolution of Modesty—The Phenomena of Sexual Periodicity and Auto-Erotism.

Infant Feeding in its Relation to Health and Disease. By LOUIS FISCHER, M.D., Attending Physician to the Children's Service of the New York German Polyklinik, etc., etc. With fifty-two illustrations, with twenty-three charts and tables, mostly original. F. A. Davis Company, Publishers. 1901.

The reader will find much valuable information in this little book. One feature that is of considerable interest is the writer's attack, for it can scarcely be called less, on the Walker-Gordon process of modifying milk and on Dr. Rotch. The author prefers pure milk modified at home.

Very many references are made by the author to articles, both original and translated, appearing in various American and European journals. As a whole, we should say that the tone of the work is too controversial for a text-book. K. C. M.

A Practical Treatise on Medical Diagnosis. For the use of Students and Practitioners. By JOHN H. MUSSER, M.D., Professor of Clinical Medicine, University of Pennsylvania, Philadelphia. New (4th) edition, thoroughly revised. In one octavo volume of 1104 pages, with 250 engravings and 49 full-page colored plates. Cloth, \$6.00, net; leather, \$7.00, net; half morocco, \$7.50, net. Lea Brothers & Co., Publishers, Philadelphia and New York. October, 1900.

In view of the fact that no work has done so much to put the science of Diagnosis upon a firm practical basis, pointing out clearly the best and most modern methods of precision, both clinical and laboratory, it is not surprising that "Musser's Medical Diagnosis" has become the leading and standard book on its subject.

Successful treatment, the aim of every practitioner, can follow only an accurate and complete diagnosis, and this in turn demands the use of every known method of investigating symptoms and conditions, however complicated or obscure. To no more trustworthy, authoritative, modern or comprehensive book can the practitioner refer in times of anxiety and doubt than the one under consideration.

Instruments of precision, the topography of disease and every accepted method of clinical and bedside investigation are described so clearly, and with such fulness, that the work is appreciated equally as a text-book in the best medical colleges and as a never-failing consultant for the practitioner.

The constant and increasing demand renders necessary the issue of frequent editions, and enables the author to keep his work carefully revised to the latest date, as will be seen upon examining the present edition, notwithstanding the fact that its predecessor was published less than a year ago. The illustrations have been revised as thoroughly as the text, and besides 250 engravings, the book contains no fewer than forty-nine full-page colored plates.

A Text-book of the Diseases of Women. By HENRY J. GARRIGUES, A.M., M.D., Gynecologist to St. Mark's Hospital in New York City; Gynecologist to the German Dispensary; Consulting Obstetric Surgeon to the New York Maternity Hospital, etc. With 367 illustrations. Third edition, thoroughly revised. Philadelphia: W. B. Saunders & Co. Canadian Agents, Carveth & Co., Parliament Street, Toronto.

The press notices of the first edition were commendatory in the extreme, and the fact that a third edition was called for in two years is a full endorsement of the complimentary opinions passed upon this "most practical," "really good," "most complete," "condensed," "clear," "comprehensive," and "in every way a good guide for the physician," and "a safe book for both students and practitioners." What more need be said?

Obstetric and Gynecologic Nursing. By EDWARD P. DAVIS, A.M., M.D., Professor of Obstetrics in the Jefferson Medical College, Philadelphia, and in the Philadelphia Polyclinic; Obstetrician to the Jefferson and Polyclinic Hospitals; Obstetrician and Gynecologist to the Philadelphia Hospital. W. B. Saunders & Co., Philadelphia and London. Canadian Agents, J. A. Carveth & Co., Toronto, Ont. Price, \$1.75.

This book was prepared by Dr. Davis for the training schools of the Jefferson and Philadelphia Hospitals, in both of which he is one of the instructors. We cannot say that we agree with the author in all his details; for instance, we do not believe that a mercuric-chloride douche should be administered before labor. However, we have but few faults to find with the book as a whole. We may go a little further, and say, that it is the best work we have seen on the subject. We have no hesitation in recommending it, especially to those nurses who are taking a three years' course.

The American Year-Book of Medicine and Surgery for 1901. A yearly digest of Scientific Progress and Authoritative Opinion in all branches of Medicine and Surgery, drawn from journals, monographs, and text-books of the leading American and foreign authors and investigators. Arranged with critical editorial comments, by eminent American specialists. In two volumes—Volume I, including General Medicine, octavo, 681 pages, illustrated; Volume II., General Surgery, octavo, 610 pages, illustrated. Philadelphia and London: W. B. Saunders & Co., 1901. Per volume: Cloth, \$3.00 net; half morocco, \$3.75 net.

The issue of the Year-Book for 1900 in two volumes met with such general approval from the profession that the publishers decided to follow the same plan with the Year-Book for 1901. This arrangement has a two-fold advantage. To the physician who uses the entire book, it offers an increased amount of matter in the most convenient form for easy consultation, and without any increase in price; while specialists and others who want either the medical or the surgical section

alone, secure the complete consideration of their branch at a nominal sum, without the necessity of purchasing considerable material for which they have no special use.

The volume under review is devoted to medicine, and consists of 700 pages. General Medicine is written up by Dr. Stengel, Pediatrics by Dr. Louis Starr, Bacteriology by Drs. Riesman and Kelly, Nervous and Mental Diseases by Dr. Church, Materia Medica and Therapeutics by Drs. Wilcox and Stevens, Physiology by Dr. J. N. Stewart, Legal Medicine by Dr. Wyatt Johnston, Physiologic Chemistry, by Drs. Jones and Hunt. The very best literature of the year 1900 has been placed under tribute to the make-up of the present volume. It gives a full and fair review of the progress in medicine. The work is a very useful one. Canadian agents, J. A. Carveth & Co., Toronto.

The American Year-Book of Medicine and Surgery. Being a yearly Digest of Scientific Progress and Authoritative Opinion in all Branches of Medicine and Surgery, drawn from journals, monographs, and textbooks of the leading American and foreign authors and investigators. Collected and arranged with critical editorial comments, by J. M. Baldy, M.D., Charles H. Burnett, M.D., J. Chalmers Dacosta, M.D., W. A. Newman Dorland, M.D., Virgil P. Gibney, M.D., C. A. Hamann, M.D., Howard F. Hansell, M.D., Barton Cooke Hurst, M.D., E. Fletcher Ingals, M.D., W. W. Keen, M.D., Henry G. Ohls, M.D., Wendell Reber, M.D., J. Hilton Waterman, M.D., under the general editorial charge of George M. Gould, M.D., in two volumes, \$6.00. Surgery. Philadelphia and London: W. B. Saunders & Company; Canadian Agents, J. A. Carveth & Company, Toronto, Ont.

The class of reading that the busy practitioner requires to-day is something that is concise, complete, and up-to-date. "The American Year-Book of Medicine and Surgery" embraces these three qualities. The editor-in-chief, Dr. George M. Gould, has surrounded himself with a very brilliant staff of co-editors, and in looking over the volume on surgery we were struck with the completeness of all the departments. It is impossible to review any work of this character, because the work itself is a general review of surgery for the year, with comments thereon. We can recommend the work most highly, and are not using any stereotyped term when we say that no doctor can afford to be without these two volumes. All references to the original article are given, so that persons wishing to follow up the subject may procure the original article in every case. The work is divided into departments, which makes the references more easy, and each department is under the charge of gentlemen eminent in the particular branch of surgery to which he is assigned a department.

The typographical work, illustrations and binding are of the excellent quality that the W. B. Saunders Co. always puts out.

Students' Edition, A Practical Treatise of Materia Medica and Therapeutics, with special reference to the Clinical Application of Drugs. By John V. Shoemaker, M.D., LL.D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Medicine and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia; Physician to the Medico-Chirurgical Hospital; Member of the American Medical Association, of the Pennsylvania and Minnesota State Medical Societies, the American Academy of Medicine, the British Medical Association; Fellow of the Medical Society of London, etc., etc. Fifth Edition. Thoroughly Revised. $6\frac{1}{2} \times 9\frac{1}{2}$ inches. Pages vii-770. Extra cloth, \$4.00, net; sheep, \$4.75, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

This is a handsome and a valuable work. The author has long been known as an able writer on Therapeutics. This volume is brought well up to date. The first seventy-five pages deal with general Therapeutic matters and contain much useful information on Materia Medica, Pharmacy, Prescription Writing, Prisms and Antidotes and the Classification of Remedies. Each drug is dealt with under the headings of Description, Dose, Pharmacology, Physiological Action and Theology. There are in the work many formulæ showing the methods of combining drugs in the treatment of disease. The language of the author is simple and clear. We can recommend the work with much pleasure.

American Text-Book of Physiology. Edited by W. H. HOWELL, Ph.D., M.D., Professor of Physiology in Johns Hopkins University, Baltimore, Md. Second edition, revised. Vol. 2. Muscle and Nerve; Central Nervous System; the Special Senses; Special Muscular Mechanism; Reproduction. Philadelphia and London: W. B. Saunders & Co., 1901. Toronto: J. A. Carveth & Co. Price, cloth, \$3.00. Leather, \$3.75.

The contributors to this volume are H. P. Bowditch, H. H. Donaldson, F. S. Lee, W. P. Lombard and H. Sewall. The writers hold prominent positions in the medical departments of Harvard, University of Chicago, Columbia University, University of Michigan and University of Denver. It would naturally be expected that writings from their hands would be of a high standard of merit, and such is the case.

The illustrations are numerous and good. The paper, type and binding all go to make up a thoroughly readable book.

The scientific views of the authors are those now generally accepted by physiologists. Prof. Donaldson, in his section on the central nervous system, adopts the neuronic theory as his working basis. In this position most will agree. It should be noted, however, that Prof. Schaefer, in a similar work just now published in Britain, takes strong ground against the neuron theory. Prof. Donaldson meets the difficulty raised by the opponents of the theory as to how the nerve impulses

pass from one neuron to another, by citing another equally important difficulty and one where we know the impulses do pass from one structure to another. In the case of the relation of the nerve ending and the neuromuscle fibre, we have only a case of close contact, yet we know that the nerve impulse does pass to the muscle fibre, most likely by some minute chemical change that takes place between them, as in the terminals of an electric machine. This position being established, it must cease to be regarded as an insurmountable difficulty to the neuron theory, the fact that the neurons are independent of each other, and have no integral union. Impulses can pass from one neuron to another, as they pass from nerve endings to muscle fibres. In this we think Prof. Donaldson is absolutely correct.

One naturally turns the pages over to the chapter on Reproduction to ascertain what position so distinguished a physiologist as Prof. Lee would take on the theories of heredity. He passes under careful review the theories of His, Weismann, Nägeli, Darwin, Spencer and others. The theory of the germ-plasm, so ably expounded by Prof. Weismann, of Freiburg, receives due attention. The theory of variations, founded upon Darwin's, Brooks' and Gatten's views, that while something is inherited in the form of germ-plasm, something is also added by the individual. This leads to the theory of epigenesis. This theory holds that there is no absolute predetermination in the formation of the various cells of the body, and that this is largely a question of their physical and chemical surroundings. The views of many of the leading physiologists are a sort of compromise between the full germ-plasm theory of Weismann, and the epigenesis theory of those who adopt the theory of variations. The writer does not commit himself to a very definite statement of his own position, but admits that modern physiologists incline to look for some truth, both in the doctrines of preformation and epigenesis.

SUNSHINE AND SLEEP.—Sleepless people—and there are many in America—should court the sun. The very worst soporific is laudanum, and the very best is sunshine. Therefore, it is very plain that poor sleepers should pass as many hours as possible in the sunshine, and as few as possible in the shade. Many women are martyrs, and yet they do not know it. They wear veils, carry parasols, and do all they possibly can to keep off the potent influence which is intended to give them strength, beauty and cheerfulness. The women of America are pale and delicate. They may be blooming and strong, and the sunlight will be a potent influence in this transformation. —*Pub. Health Journal.*

Selections.

SURGICAL HINTS.

Old age and youth should certainly cause caution in operating, but both babes and old people can stand a good deal, and their age should never lead the surgeon to condemn them to death because he is too timid to take his chances.

When a patient has been very badly injured, remember that a condition of buoyant hopefulness is an indication of shock rather than of vitality, and do not let it lead you into the idea that the case is one favorable for operation. Count the pulse and investigate the temperature of the skin. The chances will be that heat and stimulation are needed.

In severe injuries of the head it is sometimes difficult to distinguish sutures and vascular grooves from fissured fractures, even after careful examination. Wipe the part over carefully with a sponge of absorbent cotton or gauze. The blood lying in a suture or groove may always be wiped away, whereas no amount of rubbing will remove the line of blood effused between fractured bones or separated sutures.

Abscesses and cysts situated in the body of the lower jaw often closely simulate solid tumors, and such swellings should always be opened before removing any portion of the jaw. It has more than once occurred that good surgeons have removed part of the jaw for a tumor that only required perforation and drainage. The bone, even in the case of chronic abscess, seldom becomes so thin as to give the crackling sensation afforded by some abscesses of other bones.—*International Journal of Surgery*.

The Action of Alcohol.

Prof. G. Sims Woodhead, in *Journal of Inebriety* for January, states that the excessive use of alcohol causes marked changes in the cells of the organs. One of these changes is that known as cloudy swelling. The large swollen cells are granular. The nucleus is usually obscured. This cloudy swelling goes on to fatty degeneration. Another action of alcohol is to lessen or destroy the scavenging power of the leucocytes. Under the influence of alcohol they lose the capacity for absorbing poisons and producing anti-toxins. Under the influence of alcohol, these white cells fail to wall off organisms from the general circulation. In a number of experiments performed upon

animals, it was found that in those which had been alcoholized, the introduction of poison germs were very fatal; whereas in other animals free from the influence of alcohol, the germs had much less power to infect the system and destroy their lives. In such diseases as tetanus, rabies, streptococcus, the resisting power of the animal was much reduced when given alcohol. Alcoholics do very badly in pneumonia.

Suppuration Due to the Diphtheria Bacillus.

Adolf Hala, in the *Wiener Klinische Rundschau* of December 9th, 1900, publishes a case of what he regards as suppuration due to the diphtheria bacillus. The trouble occurred in an anemic patient who presented a small tumor at the outer angle of the eye. The skin over the tumor was dark-red and smooth, and the mass presented distinct fluctuation. The tissue surrounding the tumor was infiltrated and firm, but there was no evidence of any injury to the skin. The glands at the angle of the jaw on the affected side were swollen; the antrum of Highmore and the nose upon the same side were not involved. The tumor on the eyelid was incised, and discharged a chocolate-colored mass, accompanied by a few drops of greenish-yellow pus. The tissues of the tumor were necrotic. Micro-organisms of the pus upon cultivation gave all the characteristic cultural and staining reactions of the diphtheria bacillus.

The Cause of the Prevalence of Appendicitis.

It is difficult to resist the conclusion that appendicitis is really more prevalent now than in years gone by. Without being in any sense a new disease, it is doubtful whether what our predecessors called typhlitis or perityphlitis was exactly the lesion now known as appendicitis. At the last meeting of the French Academy of Medicine Dr. Lucas-Championnière, in discussing this question, pointed out that between the years 1882 to 1898 he only had to operate for iliac abscess thirty-four times, while he had nineteen in the two subsequent years, a contrast which appears to prove that iliac abscess is far more frequent now than formerly. He ascribes the greater frequency of appendicular lesions to a multiplication of the sources of intestinal infection, and he points out that appendicitis is most prevalent in countries like the United States and England, where meat enters very largely into the popular dietary, and, in his own experience, he states that he has met with the lesion especially in persons who habitually consumed unusually large quantities of meat. Another possible cause incriminated by this authority, is the discredit into which the use of purgatives has fallen. Formerly, he observes, it was the custom to purge young people at every change of season,

and he regrets apparently that the practice has fallen into abeyance. He holds, in short, that the occurrence of appendicitis might be rendered vastly less frequent if people would eat less meat, and would secure the complete evacuation of the intestinal contents by periodical purging. These views are not exactly novel; indeed, in one form or another, they are universally recognized. It is a matter of experience that appendicitis occurs mostly in persons of a constipated habit. It is recognized to be always a disease of infective origin, and it follows that a diet rich in nitrogenous constituents must necessarily be more prone to decomposition, and must provide a more congenial *milieu* for pathogenic microbes than the intestinal contents of those who draw their nourishment more from the vegetable world. We make a present of this fact to our friends the vegetarians, warning them, in passing, that in avoiding Scylla they may fall victims to Charybdis. As one might anticipate, dyspeptics are specially prone to appendicitis. They are usually of a constipated habit, and digestion being imperfect and slow, they are more liable than others to fermentative changes in the imperfectly digested food; moreover, their digestive juices are less active and less able to destroy pathogenic organisms which may happen to be present, than the secretions of the healthy human animal. These are points worth bearing in mind, for there is every reason to believe that by attention to the principles enunciated by M. Lucas-Championnière a certain proportion of the cases of appendicular infection might be averted in persons predisposed thereto. Prevention is better than cure, and the success of surgical intervention, early undertaken, is not of itself a reason for not doing our best to render it unnecessary.—*Medical Press*.

Treatment of Mosquito Bites.

Dr. A. Manquat has treated numerous cases of mosquito bites with various substances, and has come to the conclusion that the most efficient applications are formaldehyde tincture of iodine, and alcohol, or eau de cologne with menthol. The solution of formaldehyde the author uses consists of: Formaldehyde (40 per cent.), 1 dram; alcohol and water, of each 2 drams. As to the relative efficiency of the above-mentioned substances, formaldehyde takes the first place, but it causes considerable burning and sometimes even inflammatory reaction, and must be applied several times in succession. Tincture of iodine leaves a stain, produces desquamation of the skin and can, therefore, not be used very well on exposed portions of the body. For ordinary cases the application of alcohol or eau de cologne with menthol will, therefore, be found more satisfactory.—*Merck's Archives*.

EXTRACTS FROM REPORT OF RESEARCH EXPERIMENTS ON THE PHYSIOLOGICAL ACTION OF PETROLEUM.

By G. BURBIDGE WHITE, A.B., M.D.,

Diplomate in State Medicine, University of Dublin; Late Examiner in Physiology, Senior Demonstrator of Anatomy, and Demonstrator of Materia Medica, R.E.S.I., Late Pathologist, Meath Hospital and County Dublin Infirmary; Surgeon to the City Hospital for Diseases of the Skin, Dublin.

In the report which follows, it is proposed to embody the experiments conducted by myself with petroleum, as to its behaviour physiologically in the body, with a view of explaining the clinical effects (which have already been observed and recorded largely) that follow its administration in diseases of various kinds, viz.: increase of weight, diminution of catarrh of mucous surfaces, relief of dyspepsia and constipation, relief of flatulence and cystitis, etc. After careful comparative chemical examinations, Angier's Petroleum Emulsion was selected because of its purity, palatability and because it was the best adapted form of petroleum for internal administration. Research experiments were made from chemical, bacteriological, histological, physiological, and clinical aspects.

Effect upon Fermentation.—With regard to the chemical portion of the investigation, in which I was ably assisted by Prof. Kelly, I found that while the emulsion completely inhibits vinous, lactic, and butyric fermentation and the growth of putrefactive bacteria, such as inhabit the alimentary canal, preventing the formation of spirit, lactic acid, or foul gases, it has no retarding action upon either peptic or tryptic digestion, both of which we were able to carry on successfully in presence of a very large percentage of petroleum emulsion.

As a Solvent and Vehicle.—Another not less interesting and important fact is that the emulsion is a solvent of considerable power both of drugs and of animal substances, such as oils and peptones, which latter it also emulsifies in larger percentages and holds, especially at the temperature of the body, for a considerable time, longer than would be required for absorption from the alimentary canal. Lard, cod-liver oil, clear bacon fat, etc., are readily dissolved in the emulsion, as also is butter fat, and an important effect of the mixture of these two substances is that the particles of fat are rendered more mobile, more easily miscible with water and fluids, and these fluids and

these solutions of them pour out of glass vessels not clinging to the sides, which can afterwards be rinsed clean with plain cold water.

Peptones are freely taken up by the emulsion to 50 per cent. and upwards, and held well in combination without separation, and a somewhat similar effect follows their admixture. The peptones pour more easily, and more quickly diffuse through water and fluids of lesser density, also pour easily and cleanly from glass tubes.

Quite a number of experiments were made to prove these results, as these substances are important factors in alimentation the importance of the effects of mixing the emulsion with them will be manifest.

Bacteriological Experiments.—By bacteriological investigation with the emulsion it was found that no organisms could be grown in either pure petroleum or petroleum emulsion; this is doubtless due to its affording no food for their nourishment, owing to the want of the property of chemical combination.

Physiological Experiments.—The rabbit, cat and dog, were selected for the physiological portion of the investigation, which involved much time and trouble in its performance, and was undertaken to study the biological action of the emulsion in the body. It will be, perhaps, unnecessary to state that the food conditions were equal and constant before and after the administration of the emulsion, and care was taken to compare similar and not dissimilar conditions; when food was to be introduced into the stomach or bowels, peptone was the food selected in conjunction with emulsion.

A dog of previously determined weight was denied all food for a period of twenty-four hours and was given instead a quantity of petroleum emulsion, equal in weight to the amount of regular food which the dog had consumed in the twenty-four hours previous to the experiment. Under the administration of the petroleum alone the dog lost two ounces in weight. This dog was then given small quantities of food in addition to a minimum amount of Angier's Petroleum Emulsion, and the weight of the animal increased in three days to four ounces in excess of the original weight. This proves that while petroleum in itself is not capable of maintaining body nutrition, given in conjunction with even small quantities of food, it causes an increased utilization of the latter over that possible from food alone, so that the body weight promptly, steadily and progressively increased.

Effect on Digestion.—Digestion and assimilation are natural processes, and any product which delays, hampers or renders more difficult these processes, cannot help but inhibit nutrition. To determine the effect of petroleum on digestion, there was

administered in some cases food alone, and in other cases food plus Angier's Petroleum Emulsion to both persons and dogs, and then extracted the stomach contents for purposes of comparison. It was found that in the cases in which food alone was given, digestion was less rapid and less complete than in those cases to which were administered food plus petroleum. It was further noted in the above experiments that petroleum administered in ten times the regular dose, did not in a single instance induce eructations, gastric distress or toxic symptoms of any kind. These experiments prove that petroleum facilitates and expedites digestion without producing a single symptom indicative of gastric irritation or toxic infection.

Effect of Absorption.—Absorption is the *sine qua non* of nutrition. Food is of no value unless it is absorbed. The process of absorption is, however, a complicated one and embraces several distinct factors. Experiments to determine the effect of Angier's Petroleum Emulsion on absorption are hereby briefly recorded. In the first place, any agent that influences absorption must behave in a certain manner towards food products, digested and undigested. It has already been shown that petroleum has solvent properties possessed by few if any other agents. Peptones, for instance, the finished product of the digestion of albuminous substances, are completely dissolved by mixture with this petroleum emulsion. The mixture thus obtained is held in combination, is more rapidly diffusible through water and fluids of lesser density, and the individual particles rendered more mobile.

Another series of experiments with an important class of food stuffs, fats, showed that butter, lard, and even clear bacon fat are immediately dissolved and emulsified; the fat particles become more mobile and freely miscible with water and other fluids, and the solution of fats in petroleum pours out of the vessel without clinging to the sides, and the glass may be then rinsed clean with cold water. *These experiments prove that the effect of petroleum emulsion on fats is exactly similar to that produced by the combined effects of the bile and pancreatic juice; they explain one important step of the universally attested effect of Angier's Petroleum Emulsion on nutrition, i.e., the perfect preparation of food stuffs for absorption.*

As to the effect of petroleum on the process of absorption itself, the following experiments are conclusive. Two large dogs were fed, one with peptone solution, the second with peptone solution plus petroleum emulsion. Ligatures were then placed around the esophageal end of the stomach and around the duodenum just below the exit of the pancreatic duct, thus completely isolating the stomach. In the dog to which had been given peptone plus petroleum emulsion, absorp-

tion was not only more complete, but was finished in a much shorter time than in the case of the dog to which peptone solution alone was administered.

That the emulsion quickens absorption is again manifest in the following experiment: In a dog the bowel was ligatured near the stomach, the upper end of the stomach was closed, and a dose of petroleum emulsion with egg peptone introduced through a gastric fistula. The animal lived for two hours; when opened after death the stomach was found empty. Allowing for paralytic effects which follow surgical injuries, there is no doubt that these mixtures are more quickly diffusible, and would be evidently more so under less artificial conditions.

Bearing in mind what has been recorded about mobility and miscibility of the particles of mixture of peptone and petroleum emulsion, the two following experiments show the effect of petroleum in promoting absorption from the intestines:

A large dog, fed carefully, was selected for the following experiment: The vena portæ was exposed, a canula introduced, and the flow noted and controlled, feeding being effected by peptone introduced through a fistula in the stomach. Next, a mixture of about fifty per cent. of peptone and petroleum emulsion was introduced through the fistula, which was then closed. Peristalsis was increased after introduction of peptone plus emulsion; the after-flow, when absorption commenced, was noted to be greater per minute, thus indicating increased absorption in the latter case in equal times. In regard to the effect of petroleum emulsion on peristalsis, a ligature was placed around the bowel of a rabbit and peristalsis noted to remain about the same above and below it. Peptone introduced through a fistula above the ligature caused little alteration. Peptone plus emulsion, after a short time, caused a decided increase down to the ligature, while the bowel below the ligature remained as before. It was particularly noted also that peristalsis was brisk, and persisted for quite a long time in those animals which had been fed on the emulsion. In those which had not had the emulsion, peristalsis almost ceased with death. Here, then, we have three things proved, viz., the effect of the petroleum is to increase mobility and miscibility of digested material by virtue of its lubricating action and capillary affinity, while increased peristalsis helps, by presenting these prepared materials constantly to the wall of the bowel for absorption, as well as aiding, by muscular movements, in sending the absorbed material up the veins.

Thus on purely experimental grounds, on evidence of the physical senses, is the action of petroleum explained: It facilitates and hastens the digestion of food stuffs, prepares them for absorption and absolutely compels absorption of the finished

products of digestion. This, in turn, explains the beneficial effects of the petroleum emulsion on nutrition ; its principle of remedial action is not, as in the case with animal oils, to offer impaired nature a food stuff difficult of digestion and sure of irritating already troubled digestive organs.

Action on Mucous Membranes.—Some interesting experiments, conducted by Dr. White and Professor Kelly, throw much light upon the specific therapeutic action of Angier's Petroleum Emulsion on mucous membranes. It was found by bacteriologic examination that the petroleum emulsion, even when exposed to the air for days, was entirely free from bacteria. Petroleum emulsion contains no food material upon which bacteria can thrive. This explains the clinical fact that petroleum emulsion relieves the symptoms due to the by-products of the various fermentations, and shows why auto-intoxication—which results from the growth of putrefactive bacteria and their toxine in the intestines—is not possible when Angier's Petroleum Emulsion is administered.

A series of experiments were conducted, in order to determine the effect of petroleum as a vehicle for the administration of intestinal antiseptics. My results corroborated those of Robinson, reported in the *Medical News*, July 14th, 1900. Robinson states : "I have extensively given petroleum four times a day, and reclaimed the oil from the feces, and found it to contain some salol and its components, phenol and salicylic acid. This proves the carrying of a chemical antiseptic and anti-ferment through the entire canal. It is a solvent of iodine, sulphur, beta-naphthol, naphthaline, menthol, thymol, camphor, and iodoform. By combination of any of the antiseptics mentioned with petroleum emulsion, a germ-free condition of the intestinal canal is assured and which is not, according to the highest authority, obtainable by any other means.

A clinical study of petroleum emulsion was now made equally as complete and scientific as the experimental study. Four cases, selected at random from a large series, illustrate the effects of the petroleum emulsion, and are herewith briefly recorded.

No. 1 case had been the victim of a severe railway accident last January, in the form of a violent shock, followed shortly afterwards by loss of flesh, first gradual, then becoming rapid, and in three months, when seen, he had lost twenty-two pounds. He had a nasty cough, with profuse bronchial discharge ; looked very ill and thin.

No. 2 case has lost seven pounds, and was uncertain as to the length of time it took. Patient suffered from slight consolidation of the lung, cough and discharge from chest.

No. 3 case had lost five pounds, was suffering from atonic dyspepsia, with flatus and constipation, and feeling weak.

No. 4 case had lost five pounds in five months, nutrition faulty, weak digestion, poor appetite.

The treatment of these cases was by Angier's Petroleum Emulsion, a teaspoonful increased to two teaspoonfuls after food, dietetic directions and first relief by a gentle laxative; the results are here appended:

A Gain of Twenty-five Pounds in Weight.—No. 1 case showed improvement from the beginning, and after a period of two months and a half had regained his original weight, eleven stone, seven pounds (one hundred and sixty-one pounds). Towards the end of August his weight had increased to eleven stone ten pounds, three pounds in excess of his original weight, or a total gain of twenty-five pounds in five months. Bronchial catarrh had almost disappeared. During his treatment the patient mentioned to me that he saw films of petroleum on his urine, and there was no difficulty, on evaporating some of his water, in getting quite an appreciable quantity of petroleum from it.

No. 2 case also made good progress and gained five pounds in weight in two months. Lung clearer and health better.

No. 3 case has slowly gained two pounds in three months, flatulence being considerably better, and constipation also better (a chronic case).

No. 4 case has gained three and a half pounds in two months, and with relief from all symptoms.

These results corroborate those reported by Dr. William Duffield Robinson (*Medical News*, July 14th, 1900), who treated a large series of cases by petroleum emulsion. This authority states:

"It can be assuredly asserted that the effect of these petroleum products is decided, and is far more than a simple intestinal lubricant. In over fifty selected cases where nutrition, digestion and body weight were impaired, and the purest oil administered in one or two dram doses four times a day for periods of from three to six months, there was in every instance increase in weight and improvement in health, strength, and feeling of well-being.

The gain in weight was five and a quarter to twenty-three and a half pounds. There was no other change in living conditions or medication which might have caused these improvements. It gave no discomfort in any instance."

From the experiments herewith recorded, the following conclusions concerning the physiologic and therapeutic action of petroleum emulsion may be adduced:

1. Inhibitory to the growth of putrefactive and pathogenic bacteria, such as met with in the alimentary canal, while it does not inhibit or interfere with peptic and pancreatic digestion.

2. And, therefore, is an agent for relieving flatulence by preventing fermentation in such conditions of the bowel; in fact, it acts the part of an intestinal antiseptic.

3. By its action in stimulating peristalsis, increasing diffusibility of intestinal contents, it not only increases nutrition and weight, but helps the natural movements of the bowels, by its lubricating power relieves constipation, and favors the elimination of noxious and toxic products from the system.

As to its weight-increasing action, there can be no doubt of that in the face of the results of the experiments recorded. There is but one way to increase weight by whatever means employed, *i.e.*, an increased flow or absorption of digested weight-giving material such as peptones, chyle, etc., and particularly the former.

1. The weight gained under its influence is much greater in proportion than it or any other oil could afford, even if digested and absorbed.

2. Petroleum is perfectly incombinable chemically, and indigestible, but the result of the experiments in this direction at once shows that though this be the case, yet when the emulsion is mixed with digested food material the effect is very different. Its action then is to cause an increased flow of this digested assimilable material (which is weight-giving) through the portal system to the blood and tissues in a given time, which being deposited each day leads to accumulation of weight in the tissues of the body. This daily gain added up at the end of many days represents the increase of weight so often recorded from its action; of course, under these circumstances, the rate of elimination of body waste is supposed to be fairly constant. It will also follow that the greater the rate of elimination from the body, the slower will be the increase of weight under the influence of the emulsion.

Two years ago Dr. Rudolf Herzog, of Tübingen, undertook excavations in the island of Cos with the view of finding the temple of Æsculapius. At a depth of eighty centimetres (thirty-two inches) he came upon a mosaic flooring which represented Orpheus charming the wild beasts. At a depth of two and a half metres (nearly eight feet), in the neighborhood of the church of St. Anna, he found two columns, and not far from them the remains of an aqueduct and a small statue of a young man. Great importance is attached to Dr. Herzog's discovery of the supposed temple of Æsculapius. The excavations are still in progress, and it is hoped that many antiquities will be found.—*Med. Age.*

The Canadian Practitioner and Review.

VOL. XXVI.

TORONTO, MAY, 1901.

NO. 5.

Original Communications.

A CASE OF PRIMARY ABDOMINAL PREGNANCY.

BY J. E. PICKARD, M.D., VIRGINIA CITY, NEVADA.

Mrs. R., aged 35, short and stout in stature. Nationality, Swiss. Has always been fairly healthy, except that she had a long and severe attack of inflammatory rheumatism about nine years ago, which left her with a weak and irritable heart.

Has given birth to three children and had two miscarriages.

Menstruated last on April 28, 1900, and at the usual time began showing the usual symptoms of pregnancy.

About the third month, or perhaps sooner, began to have frequent attacks of intermittent abdominal pains, especially at night, and I thought of tubal pregnancy; but these attacks were never severe, nor did they last long, and a few doses of viburnum would allay them. Besides, there never were any discharges of blood or signs of menstruation. On a former occasion, when pregnant, she had frequent pains, and finally miscarried at the fourth month. All of which made me feel that I was not warranted in either performing laparotomy or exploring the uterus, since the only sign of extra-uterine pregnancy was the frequent attacks of pain. When the fourth and fifth month passed without any tubal rupture, and the child continuing to live and grow, I concluded that my fears of extra-uterine pregnancy had been ungrounded. From the fifth month on she felt fairly well and did not suffer so much, considering the fact that she assisted in nursing two children, one after the other, through an attack of mild typhoid fever, during the months of October and November. In January of this year, I was called to see her, and found her with fever of a bilious character, a

great deal of bile in stools and urine. She was quite sick for a few days and developed some jaundice. Soon, however, the fever passed away. The kidneys and liver resumed their usual function, and her condition was about the same as before the attack, excepting that the pulse continued weak and rapid in spite of tonic containing strophantus and strychnia.

A few days after recovering from the fever she told me that the fetal movements had ceased, and upon applying the stethoscope found the fetal heart sound had ceased. These on several previous examinations were distinct and strong. I attributed the death of the child to bile poisoning, there having been so much in the mother's blood.

We expected labor to take place between the fifth and eighth of February. On the night of the seventh I was sent for, but on arriving found the pains feeble and far apart, but enough to show that labor was being attempted. The cervix and os, however, showed no signs of approaching labor. In a short time pains ceased and patient in the same condition as before.

The examining finger could distinctly feel breech in front of uterus.

Hoping from day to day labor would set in, I waited until February 22, then asked for a consultation. Dr. P. T. Phillips, of Reno, was called. I told him that on account of the early history of the pregnancy and the ease with which I could feel the upper parts of the child through the abdominal wall, I feared the case to be one of abdominal pregnancy. He made as careful and thorough an examination as was possible without an anesthetic. This was difficult on account of the high, backward position of the os and the long cervix. However, he was able to get tip of examining finger just within the internal os. He gave it as his opinion that although it was impossible to make an absolute diagnosis without going farther into the uterus, it was a case of intra-uterine pregnancy with breech presentation, as he could feel the breech so distinctly, and suggested it might possibly be a case of missed labor, since many cases of gestation went 300 days. He advised that as the child was dead and would not grow larger that we wait until the 8th of March, to see if labor would not set in naturally, and if it did not to give anesthetic and dilate, and deliver if child was intra-uterine, and if extra-uterine to proceed as the case required. To this I agreed, and kept patient on tonics and nourishing but easily digested food, and attended to the functions of kidneys and bowels.

Went on in this way until March 13, but no signs of labor appeared. I then asked for assistance, and Dr. McDonald, of this city, was called in. He administered ether and I proceeded to dilate the os with my fingers; when sufficiently dilated to

admit finger into uterus, having hand in vagina, found the uterus empty, with the exception of a thin desidual membrane, resembling cast one would find in membranous dysmenorrhea. The uterus was no larger than one would expect in an unimpregnated multipara. Of course this examination proved the case to be one of abdominal pregnancy. The patient was under the influence of ether only a few minutes, and stood the anesthetic better than we expected, in fact pulse improved. But an hour or so afterwards the pulse was again weak and rapid. Vomiting set in and was a prominent symptom up to the time of her death, three days after. During this time there was great weakness and exhaustion, and was cause of death. Had hoped to get her in a condition favorable for laparotomy, but failed.

She died on the 17th, and on the 18th I performed an autopsy, assisted by Drs. McDonald and Manson, of this city. The body was in a good condition of flesh. Very little emaciation. On opening abdominal wall found a fully developed female child, weighing $8\frac{1}{2}$ pounds, lying in abdominal cavity, with breech lying well down in front of uterus.

After removing child, found a large placenta in right inguinal region, the edge attached to right inguinal abdominal wall, and the main body intimately attached to intestines. It was also attached to fimbriated extremity of right Fallopian tube.

The uterus was about the size of an ordinary empty uterus. Both ovaries normal and both Fallopian tubes normal and intact. There was no sign of the ovum ever having entered the fallopian tube, or to show that the pregnancy had ever been tubal.

My opinion is that when ovum escaped from right graafian follicle it became fecundated and never reached the Fallopian tube, but continued to develop in abdominal cavity and, therefore, a *primary* abdominal pregnancy.

I have thought this case of sufficient interest to the medical profession to report, because of the fact that so many writers on obstetrics and gynecology deny the probability of primary abdominal pregnancy ever existing.

Had I diagnosed the case correctly in the early months, an operation might have saved the patient's life, but from so little data I cannot see how a correct diagnosis could have been made.

Had the case been operated on during the latter months, am sure the result would have been a failure, since the placenta was adhered to so large a surface of intestines.

I invite discussion of the case through the PRACTITIONER.

HISTORY OF A CASE OF SMALLPOX.

REPORTED BY MR. J. GODFREY.

Disease.—Smallpox.

March 11th.—Patient was well and worked as usual.

March 12th.—She did not feel well, though she was around all day. Bones and muscles were all sore. She had no headache, she thought she had grip.

March 13th.—She was up and served dinner—went to bed in the evening, feeling the same as on previous evening.

March 14th.—Stayed in bed all day.

March 15th.—In the morning she vomited after taking a glass of hot brandy. She noticed a few "small red spots" on her wrists, and a few (four or five) on her cheeks (none on forehead first). They were red and watery-looking. Dr. Maloney, the family doctor, called morning and evening, and diagnosed it measles (W.B., her baby in the house, had measles at this time).

March 16th.—The "red spots" were all over her body. They looked like small blisters. Face was very red. Headache began, she had had none previous.

March 17th.—Dr. Maloney called. Many people visited Mrs. F. in her room. More or less headache all day.

March 18th.—The "pimples" became filled with fluid and had a clear appearance. At noon Drs. Reeves and Maloney said they thought the case was smallpox. The house was quarantined at noon and placarded. Headache persisted.

March 19th.—Headache persisted. Mrs. F. had a choking spell, and Mr. F. was unable to get any of the town doctors to come into the house and render assistance to his wife.

The above history was given by Miss —, sister of Mrs. F. March 19th, at 4 o'clock, I received a telephone message from Dr. Bryce to go to Eganville and get my orders from Dr. Reeves the medical health officer there.

Wednesday, March 20th.—I arrived in Eganville, and after listening to the Board of Health of the town discussing the event, I went into the Central Hotel at 4 o'clock p.m., where I found Dr. Maloney, who told me his course of treatment.

Treatment.—Liquid diet—broths, chicken and lamb, beef-tea, milk, albumen water, beaten white of eggs. Spray for nose and throat, which were sore and had pox: R glycerine, listerine.

She was completely covered from head to foot with vesicles, which were thicker on the face than the rest of the body. On the body one could lay a twenty-five cent piece on many patches of clear skin. On the face a five cent piece would be as large

as the spaces. In some places two, three or four vesicles had run together, but nearly all of them were discrete.

The vesicles varied in size from that of a five cent piece to that of a pea. They were red and inflamed and sharply defined at the base. The other vesicle was raised and of a pearly color.

She had a slight headache, but otherwise comfortable; eyes blood-shot and scummy—washed these with warm water. Temperature normal. Used spray on mouth and pharynx, which had pox, also gave ice to suck. Ice to forehead.

March 21st.—Patient felt fairly well, vesicles still not itchy, no headache, complained of soreness of nates (bathed with alcohol). Patient in bed all day.

March 22nd.—Vesicles now became darker in color and became a cream color. No headache. Patient quite comfortable, but still kept in bed. Eyes somewhat sore, bathed with warm water, and saturated solution boracic acid ordered to be dropped into each eye after washing, four times a day. A pock noticed on the sclerotic of right eye, also a small ulcer on conjunctiva of lower lid. On enquiry I found patient's bowels had not moved for five days. Gave calomel grs. $\frac{1}{4}$, sulphur and acid tartaric. Then gave an enema which was effectual.

March 23rd.—She was allowed to sit up for half hour. Gave a little roast beef and potatoes for dinner, quinine grs. vi. Enema. Patient felt well; no headache or backache.

March 24th.—Pus exuding from some of pustules, noticed a few umbilicating. Enema. Some scabs forming. Sat up for one hour.

March 25th.—Patient felt fine. Sat up. Toast, meat and potatoes given. Gave sponge bath twice a day from this out—1 in 40 carbolic. Face, body and scalp anointed with ac boracic grs. xl., vaseline ℥ i., used camel's hair brush. Face covered with a mask. Enema stopped, bowels moved regularly.

March 25th to March 31st.—Scales kept coming off in great numbers every day. The hands and feet were the last place, here they remained as copper colored spots; these the patient and myself picked out. They were disc-shaped, tough and dry, consisting of dried pus, placed between two layers of epidermus.

Tuesday, April 2nd.—All the scales were off. April 1st, was called at 7 a.m. and found patient with labor pains. I went for Dr. Maloney; and came back and found pains following one another very rapidly. At 8.30 a.m. child was born, in about five minutes ligated cord. Then Dr. Maloney arrived and took charge, placenta was taken away, bandage applied, a folded towel being placed over the uterus. Child was washed, dressed and left in the bed with its mother. She washed the parts herself after this with 1 in 40 carbolic

after each stool or micturition. The urine came away right after labor and was quite clear.

April 6th.—No pain or discomfort, had had afterpains before this time. Right eye somewhat sore, to which hot water was applied, also solution of zinc sulphate. Eyes still inflamed and sore. Boil on back of neck and under left mamma.

During illness from smallpox, temperature ranged between 98 and 100°, pulse 56 to 116.

Note—Woman with smallpox, pregnant, last menstruation June 28th, 1900. Child born April 1st, an apparently healthy child, weighing about 10 lbs., with no signs of its having had smallpox in utero. Labor came on just as the smallpox scales were all off the body. Patient had been vaccinated when a girl. This was her fifth child.

[This case is especially interesting from an obstetrical standpoint. The patient had variola (not varioloid). Labor took place eighteen days after she took to her bed, and sixteen days after eruption appeared. Smallpox is generally supposed to be a very severe disease under such circumstances, and dangerous to mother and fetus. In this instance the mother made a good recovery, and a healthy child was born without any symptoms of smallpox. As a general rule, in the intercurrent disease of pregnancy, a high temperature is a serious matter for the mother and child. In this case the temperature was never more than 100°, although the smallpox was to a certain extent at least confluent. One of the lessons to be learned is that the poison of smallpox without high temperature may have no bad effect on the fetus.]

A. H. W.

DIPHTHERIA VS. ACUTE FOLLICULAR TONSILLITIS.

BY JOHN GUNN, M.D., DURHAM, ONT.

Every now and again, here and there over the country, the cry gets up that diphtheria is rife. On such occasions many interests suffer, in our smaller communities especially; but one interest very much, the Public school. Parents and guardians are very properly alarmed at the approach of so fell a disease as diphtheria, and forthwith, without giving the rumor any further consideration, withdraw their children from the Public school, very often though to the great injury of those children themselves, and as well of the school as a whole.

My attention has been recently directed to this matter by the report of a case of throat trouble which appeared in a late number, that of the 6th of April, of the *British Medical Journal*. Dr. Esterre, of Eastbourne, England, was called to see a lady, herself the wife of a practising physician, said to be ill with sore throat. On a careful examination of the case, the condition of things was so obscure that both gentlemen had great difficulty in determining the true nature of the affection, whether the case was one of diphtheria or acute follicular tonsillitis (ulcerated sore throat), although they had the advantage of a bacteriological examination of the exudate upon the surface of the tonsils, and which informed them that the diphtheria bacillus was not there. However, the medical gentlemen agreed upon a line of treatment, the means were used, and, fortunately, in a few days the patient was convalescent and made a rapid recovery.

Some three months afterwards the same lady was taken ill and affected in a similar way, from sore throat with patchy exudation and general *malaise*. The same difficulty in making a diagnosis presented itself as on the previous occasion, but with the experience of the first attack before them, the medical gentlemen adopted a similar course of treatment as on the last occasion, and with similar results—the patient was convalescent in a few days.

Just as in these cases, so in all acute throat affections of an inflammatory character, there are two conditions in which diphtheria markedly differs from acute follicular tonsillitis (ulcerated sore throat): (1) The temperature which, indeed, in diphtheria rises rapidly and maintains a high level from the beginning to the close—a variable period to be sure—but usually lasting for weeks. On the other hand, in acute follicular tonsillitis, however high the temperature may be on the first day, it rapidly falls to the normal, and usually gives no

further indication of rising again. (2) Equally distinctive with the temperature is the condition of the throat. In follicular tonsillitis the exudate is distinctly patchy and mucopuriform. It may be easily removed, and leaves no raw or bleeding surface. The patches may indeed run into one another and coalesce, but they are normally of a segregate and patchy character, and varying in diameter from a fourth to half an inch, but larger, of course, when the patches coalesce. The diphtheritic exudate, on the contrary, as its name indicates, is of a distinctly membranous character, and of a whitish or greyish white color. It proceeds from a centre, and extends, often invading the uvula and hard palate, and often stretching backwards into the pharynx and larynx. But further, it does not disappear in a day or two; on the contrary, it often remains for weeks together, and when removed, leaves a bleeding surface behind. These are surely very distinctive differences. In follicular tonsillitis there are no sequelæ, properly so-called. There may be a feeling of *malaise*, but this soon passes away, and the affected children in a few days may resume their school work, as they often do, and are none the worse. The tonsillar streptococcus seems to be quite satisfied with crawling about on the tonsils and finishing its course by embedding itself in its follicles. Not so with the diphtheria bacillus. Not satisfied with destroying the vitality of the covering of the tonsils, it destroys their substance and even invades the very citadel of life, destroying the nerve cells and the muscles, obtaining their energy from them, and thus precipitating deaths when entirely unlooked for.

What inference may be fairly drawn? Plainly this, that if these things are so, and anyone can verify them for themselves, seeing that the two diseases in question, diphtheria and acute follicular tonsillitis, are somewhat similar in appearance to the ordinary observer, anyhow in their beginning, although, alas, too often so very different in their results, that when the cry of diphtheria is heard, the community, under the guidance of its medical advisers, would do well to possess its soul in patience for a day or two, before taking the matter into its own hands, paralyzing the industries of the place and upsetting the work of the children attending the Public school, for a term or two at least, they would await the finding of some central authority, the Board of Health, for instance, and so govern themselves accordingly.

Selected Articles.

THE MEDICAL TREATMENT DURING THE ADOLESCENT PERIOD.

BY EDWIN ROSENTHAL, M.D., PHILADELPHIA,

Chairman of the Section on Diseases of Children of the American Medical Association; Pediatricist
to the Franklin Free Dispensary, etc.

The adolescent period in the female may be said to be as critical in results as the menopause, and by reason of the methods of our education may be said to be one of the best known conditions universally recognized, and, as such, the common property, not only of the profession, but also of the laity. For this reason, it is not an uncommon fact to witness, not only the diagnosis of this condition being made by the "officious meddler," but also treatment. And it is very often, when such treatments have failed, that the patient is brought to the doctor. In such instances great care and discernment must be the weapons of the doctor, for it will be noted that recourse to all the old well-known remedies had been applied before further advice is sought. The commonest symptom that presents itself is the one that refers to the menstruation. And it is in all probability that this disordered condition is the most conspicuous factor that needs correction.

Two classes of cases are most numerous, and may be divided into: 1st. That class that has never menstruated, and 2nd. That class, that may have begun, shown a very slight discharge at infrequent intervals—once in six or nine months—but which has never grown to an extent at any time that may be termed a normal flow. The history of these cases are very generally of the same character, and may be briefly summarized: Digestive disorders, headache, languor, flushing, sensations of fulness in the abdomen, disturbed or unnatural sleep, or sleepy conditions during the daytime; often some cutaneous affection—acne the most common. Whilst the symptoms may be present in some, frequently only part of them may be present in certain cases, as the skin affection. During the period that should be termed the "menstrual" period the symptoms are generally aggravated. If the "acne" be present, at this time, a fresh crop of pimples appear, and thus can be noted other symptoms.

In all cases of menstrual disorders in the young, the cause must be sought for, and if found, corrected. This of certainty directs the treatment. In cases where the menstruation has

never appeared, it should always be a certain rule to have the sufferer examined by the mother. In quite a number of instances, anatomical reasons have shown the reason. In four cases an "impervious hymen" was the cause. In two cases the "uterus" became the receptacle, and contained the result of numerous menstruations, becoming enlarged even above the pubic bones; the cervix being impervious. In several instances there was an entire absence of the uterus and ovaries. This I noted in two cases, both married, and were examined for the reason. In one case, an otherwise well-developed young woman, age 21, there was an absence of a vagina. Such cases as thus enumerated, nothing can be done in the line of medication, but judicious surgical procedures may in indicated cases (impervious hymen or cervix) make a cure. Where, however, no necessary organs exist, nothing can be done, except such rules as the regulation of the bowels, etc., at stated intervals, give much relief to the frequently present nervous symptoms. Where, however, no anatomical reasons exist, and the patient suffers from suppression of the menstruation, entire or in part, much can be done to aid a cure.

The question of age frequently enters as an answer to results. We have with us such a conglomeration of different nationalities that the "age" question is a very vital one, inasmuch as, frequently, the treatment of menstrual disorders may be wrongly applied, as an example: to attempt treatment of a girl of 13 or 14, when her mother only began menstruation at 12. Experience has taught me that girls born in warmer countries, or descending from such parentage, begin to menstruate much earlier than those of colder climes. For instance, girls from Italy or Cuba begin at 12 or 13, where those from Norway or Sweden begin at 15 or 16. Again, in races, I have seen some surprising differences. The colored race have presented a girl of 10, and often I have seen girls of Russian-Jewish parentage begin at 10 or 11. So that the question of age should always enter into the treatment.

Whilst the most common symptom of disordered menstruation is "anemia" and as the better known "chlorosis," or vulgarly "green-sickness," its absence need not preclude the use of the most common of all our remedies—iron. Anemia alone may be the cause of suppressed menstruation, and while its presence may be looked upon as a certain cause, its treatment is as essential for the appearance of the menstruation as it should be for the general health of the patient. That anemia in girls is most frequently found at this time leads to the common belief that anemia, green-sickness, or whatever name this blood condition may receive, is the chief factor in menstrual disorders.

The treatment of such conditions are numerous, and should divide itself into the causative factor first, and then, after this has been relieved, to the specific symptom. In other words, it will be wrong to attempt by the use of specific remedies the appearance of the menstruation, if the physical condition of the patient is such that should not permit it.

Besides the condition of the blood as a cause of suppressed menstruation, other well-known conditions equally play a prominent part. Even if the patient should suffer from such diseases (tuberculosis as an example), the presence of a menstrual flow has such an encouraging influence upon the mind of the sufferer that some attempt should be made, and as the method pursued by myself for many years can only be of benefit, such conditions are not contra-indications for its use.

Iron is the chief remedy in menstrual disorders, and may be given at all times—before, after and during the flow. A certain time in the life of the patient should be set apart for active and specific treatment. The time chosen should be when the symptoms are most aggravated. The days, one, two or three, should be set apart, and our treatment should always culminate to this period. If we fail at the one, then we should begin again, and pursue our treatment until the second period, when the specific method should again be applied, and thus on. Even if failure should mar the first, second, or even the fifth period, the menstruation will appear, if the treatment be applied in a rational way.

Between the periods I always order the use of iron in three or four daily doses. I have used all forms and varieties, from the tincture of the chloride, which is so often objected to, to the different kinds of Pharmacopeial preparations, in pill form, as the Bland pill, simple or modified. My experience brings me back to Gude's Pepto-Mangan. Gude's Pepto-Mangan is now the most common in use, and there are so very many similar preparations in the apothecaries that care should be exercised in obtaining the genuine. I have a simple way of distinction. I always order Gude's Pepto-Mangan given with milk. If the mixture is clean, uncoagulated and palatable, then I know my patient has received what I ordered. For a further distinction, I invariably place on my prescription the name "Gude." My reasons are these: So very many so-called similar products are on the market that are inferior, and in a measure do not act in a manner you wish, clinically as well as physically. For my own defence, as I have been so frequently disappointed, I detect the fraud of substitution by mixing with liquids, especially milk; the "Gude" preparation always gives the palatable mixture.

I order of this preparation a teaspoonful in a wineglassful of

milk every three or four hours, depending upon the patient's condition. If she be very anemic, and with this very nervous, I place her upon the milk diet, and by the addition of Gude's Pepto-Mangan I reach my object, giving the food as well as the medicine. I increase the dose until a tablespoonful, three or four times daily. This treatment is kept up, and even continued through each period, until the purpose is obtained, perfect health, as regards not only the menstrual flow, but also the general physical condition.

Medical treatment is never sufficient in this class of cases, and failure is apt to result if no attention be given to other conditions; the very common class, the school girl who desires to reach the head of her class, or who studies for a prize or the like. Take the following case:

CASE I.—E. L., aged 17; large growth, over 5 feet 8 inches; reddish hair. A student of the Girls' Normal School, preparing for the teachers' certificate, which required two more years of study after the graduation. Complaints of constipation and headache. Has acne on each cheek. Has occasional backache, and has occasional attack of "nervousness," crying, etc. Her menstruation is scant, very irregular, and when it does appear, not more than one day, or probably one-half the next. Appetite erratic, though spoiled by the method of eating, as buns or cake or pie for lunch, whilst the breakfast, hurriedly eaten, was only a cup of coffee, or a roll. Her main food was the "supper-dinner," when she was "too tired or too long hungered" to eat. Once or twice I was called to quiet an hysterical attack. In this case the pimples were the bane of the young lady's life, and while she was not anemic in any sense, I placed her upon the (Gude's) Pepto-Mangan, telling my patient this medicine was for the pimples, and that I left the further treatment in her hands. This with purgative pills of aloin with nux vomica was the whole treatment. Vanity came to my assistance, as the patient desired to be rid of the eruption. Persistent use of the iron was the only medicine used, and whilst the schooling was persisted in, she passed through the period, and eventually recovered.

The second case is one that is too frequently met with, the child of the poor, who is sent too early to the "mill" or "store," and who has never been taught the commonest rules of hygiene; the girl who spends her time in work, and whose only outing, a dance or picnic, is equally as hard work.

CASE II.—Aged 14. Attended school until 12 years, and then became a cash-girl in a department store. Rather large for her age. Flabby built, and of a distinct pallor. Complaints of obstinate headache, relieved by the so-called bromos; indiges-

tion, languor, sleepy during day-time, and at night a sleep that was heavy, unnatural and disturbed by dreams; at intervals flushing with sensations of chilliness. Menstruation scanty, probably a half of one day, and very light in color. In this case work was a necessity, and even proper food could not be obtained. However, milk was the easiest and cheapest food, and from one to two quarts daily was the constant supply. To this food I added a teaspoonful of the Gude's Pepto-Mangan at each glassful, once every three hours, increasing until a tablespoonful dose was attained. This, with a purgative pill (the compound rhubarb pill of the Pharmacopeia), was the treatment persisted in for over eight months, with complete recovery. In this case the treatment was begun in the fall of the year, persisted in through the winter months, and during the following summer months a vacation of but two weeks was obtained, and the patient sent to the seashore by one of our charitable institutions. This patient was convinced of the utility of this method of treatment, as I found the following winter the same course was followed with a gratifying result, preventing any loss of time by reason of illness or otherwise.

I have also met with cases that the menstrual period came on correctly at a certain age, and continued so for a year or two, when, for some unknown reason, there was total suppression. There was no history of tubercular disease, nor could I obtain any certain cause. In one case marriage was undertaken as a hope for cure. This patient, aged 18, came to me with the following history:

CASE III.—Mrs. B.; began menstruation at the age of 13 years; regular intervals until 15 years, when the flow became scanty and scantier until only half a day, and then entirely disappeared. She had not seen a flow for two years. Examination revealed the uterus two inches in length, somewhat anteflexed. The ovaries on each side could be felt, the size of an almond; the tubes could also be felt. This patient had been under the care of many physicians, and had had several operations, even a laparotomy, for the abdominal scar was visible. Nothing had been removed, she assured me, and the examination showed this also. Dilatation of the uterus had been performed, as well as the curettement, for what I was not informed. She had also undergone electrical treatment. I treated this patient constantly for six months before a flow of blood was in evidence. My sole treatment was the internal use of the Pepto-Mangan (Gude's) in tablespoonful doses in milk, and the use of a stem pessary for a period of nine months. After this time an examination revealed the uterus two and one-half inches in length, larger in size. The tubes could be felt, and the ovaries on either side somewhat larger. Monthly flows have now been

the rule for the last three months. This patient is still under treatment, and whilst the iron is still persisted in, the result of the treatment is uncertain. I am firmly persuaded that many cases can be benefited by a correct application of our remedies, and when applied for a certain purpose.

This last patient appeared hopeless, and at the start I had little hope myself that much could be looked for. It appeared as a case of early menopause. I have seen such cases, with atrophy of the organs. Here, however, this was stopped, and I have still hope of seeing further improvement.

I have seen such good results in the use of Gude's Pepto-Mangan in septic diseases that I have applied it fearlessly in other conditions. None give better promise than those conditions that are coupled with the menstrual flow, especially when seen at the adolescent period.—*Medical Fortnightly*.

517 PINE STREET.

HOW SHALL WE DISPOSE OF OUR SEWAGE?

By R. M. BUCKE, M.D.,
London Insane Asylum, Ontario, Canada.

This is one of the most vital and important questions at present before the hygienic world. By way of making a small contribution to the discussion of it, I will state here the experience of this institution and show to what conclusion it has led us.

The London Asylum was opened for patients in November, 1870. At that time the sewer opened into a small creek a few hundred yards to the east. This creek runs nearly or quite dry every summer, and its condition after having received our sewage for a few years may easily be imagined. In answer to the clamors of the farmers, whose lives we were constantly threatening, and sometimes taking, a filtration plant was put in. The sewage was, now supposed to be made innoxious by passing through a few feet of a mixture of gravel and charcoal. The worst of it was, it was found impossible to keep our filter in order; the attempt to do so involved much labor and some expense for material, neither did it wholly remove the nuisance when it was kept at its best. Something more and better had to be done, but what? At last it was decided to adopt what is called the "Intermittent Downward Filtration" system.

A piece of sandy land some four acres in extent, a few hundred yards west of the main asylum building, was chosen for the experiment. The field was graded to a perfect level.

It was then very elaborately under-drained, which doubtless in some cases is necessary, but was in our case a waste of tile and labor, as the water from the sewage has never, any of it, entered the tile in question but has passed away by diffusion into and through the sand. After being levelled the field was graded to a series of beds and depressions, so that when done these were alternately running east and west across it, first a bed ten feet wide, then a depression with sloping sides eight feet wide at top and two feet wide across its level bottom, and eighteen inches deep. Then another exactly similar bed and depression, until the whole field was thus graded. At the east end of the field a plank runway, somewhat similar to a mining sluice and provided with little simple iron gates, conducts the sewage to and into the depressions in the field.

All the sewage of the asylum, including waste water from the laundry and kitchen, is collected by sewers into a central tank placed underground, arched over, covered with earth and then grass, and ventilated into the tall boiler house chimney. Once a day this sewage, of which there may be sixty, seventy or eighty thousand gallons, is thrown by a centrifugal pump into a shallow concrete well at the northeast angle of the sewage field, from which it runs into the depressions as already described. By means of the gates it is directed day by day to the depression or depressions where wanted. Within two to six hours after pumping the sewage has disappeared into the soil; it never has time to ferment, and there has never been any smell of sewage in any part of the institution since this method of disposal was adopted. At first what has now been told was supposed to be the whole story. There was no question of making any use of the sewage, and indeed the asylum was instructed by the Government to plant nothing on the beds between the depressions. But after a few years the temptation became too great to be longer withstood and I began planting the beds. My report for that year shows that in 1893 we grew on these beds 110 dozen watermelons, 216 dozen muskmelons, over ten thousand dozen cucumbers, beside squash, pumpkins, celery, peppers, tomatoes, peas, radishes, chillies, and that the total value of the crop on the four acres was over \$750.

Latterly we have extended the beds and depressions to about seven acres instead of four, not for purpose of sewage disposal, but so we could irrigate the beds, and attached to the sewage field a few acres of other land adjoining that had been lying waste. The result has been that last year on this sewage field we raised asparagus, beets, beans, cabbage, cauliflower, carrots, celery, lettuce, melons, onions, peas, rhubarb, strawberries, sea kale and tomatoes, to the value of \$1,840.15.

The field converted into the sewage field was high, sandy and

barren; it is now perhaps the most fertile field in Ontario; not only so, but the fruit and vegetables grown upon it are much superior in quality to those grown elsewhere, on our land at least.

Further, the barren sandy field, which had no beauty that one should desire it, is now as beautiful as it is fruitful. It has no unpleasant odor at any time, not even when the sewage is being pumped, there is nothing to offend the eye, for the sewage is converted by the centrifugal pump which handles it into a homogeneous fluid, having very much the appearance and smell of dishwater.

It is needless to say that the patients and caretaker who work on the sewage field are as healthy as any other people about the institution, or that the fruit and vegetables grown on this field are as wholesome as those grown elsewhere; in fact whatever prejudices existed in this regard at first it is now universally acknowledged that the produce of this field is in every way superior to that grown elsewhere on our farm or garden.

It seems to me that we have here in a nutshell the solution of the sewage difficulty. Wherever men upon the land are massed together permanently upon a given area—whether in city, town, village, or institution, this method can be practised, and not only by it can absolute and cleanly disposal be accomplished, but at the same time a large return of the best products of the earth may be had in exchange for a product which if not used is certain to become dangerous.

If we run our sewage into streams or bays we pollute the water, waste the sewage, and cause disease. To treat it with filters or chemicals is never, perhaps, absolutely safe from the point of view of health, is more or less expensive and the sewage itself is wasted. But if we return the sewage to the earth, to which it belongs, we obtain clean, wholesome and absolute disposal at a nominal cost, and at the same time secure the value of the sewage—a very considerable item.—*The Dietetic and Hygienic Gazette.*

Society Reports.

TORONTO CLINICAL SOCIETY.

STATED MEETING, MAY 1ST, 1901.

The President, Dr. W. H. B. Aikins, in the chair.

Visitors present: Drs. D. M. Anderson and Howland.

Tempero-Sphenoidal Abscess, Operation, Recovery—Exhibition of Patient.

Dr. Herbert A. Bruce presented this patient, and recited history of the condition. It occurred in a young man of twenty-four years. When he was a small boy, about five or six years of age, he had ear trouble, otitis media in the right ear, and was treated in Toronto by two or three ear specialists for a period of five or six months. He was taken home then apparently cured, continuing to have a little boracic acid dusted into his ear, and the discharge ceased in a few months. Up to the 1st of March of this present year had no trouble apparently at all except occasionally a little discharge at times when he got a cold; but it was nothing to speak of at any time, only a few drops, and then it would cease. He was on the ice playing a wind instrument—a trombone in the band of a country town—and the next day he was taken seriously ill. He said he felt as though he had blown a hole through his ear. His temperature was 101 and pulse increased to 100. Headache, pain in the side of the head and sickness of the stomach were present. The local doctor was called in, and prescribed for him, and he lay in bed for two weeks. He had very few symptoms when seen by Dr. Bruce. He was lying in bed quite rational, with a temperature of $97\frac{4}{5}$, and a pulse-rate of 66, with pain in the side of his head, and sickness at times. The history was that he was sick every day three or four times without any apparent cause, which had no relationship with ingestion of food. He had not been out of bed then for two weeks, and enquiry about dizziness or giddiness showed that none had been present. Dr. Bruce got him up to walk a little through the room, when he felt a little light-headed, but not more than one would expect after lying in bed that length of time, so that was not looked upon as a symptom of importance. He had much exaggerated knee jerks, and ankle clonus on both sides, particularly well marked on the right side. Drowsiness was another condition present. He slept a great deal, and seemed

drowsy and willing to go to sleep almost any time. He took nourishment fairly well. These were the only symptoms present. There were no eye symptoms. On examination of the ear Dr. Bruce found a slight discharge at the consultation in the country, very slight, with perforation of the drum. Over the mastoid there was a slight amount of swelling. Dr. Bruce came to the conclusion that there was certainly mastoid disease, and probably also cerebral abscess. He advised his removal to Toronto General Hospital, where he was taken immediately on the advice, and after two days in bed he was operated on. The condition found was briefly as follows: An incision was made in the usual position down over the mastoid, from the base to the tip, one half inch behind the ear, and the antrum was opened. Pus was found here, and then on passing a probe down into the cells these were found filled with cholesteatomatous material. A portion of the squamous bone was then chiselled away, thus exposing the temporo-sphenoidal lobe of the brain. A grooved trocar was passed in, and pus was seen oozing along the groove. A considerable quantity of pus was then evacuated, between three and four ounces, and there was a cavity as large as a tangerine orange. The ossicles were then removed from the ear, and a portion of the posterior wall of the meatus removed. A drainage tube was placed in the cavity, and dressings applied, the whole wound being left open. This operation was performed on the 14th of March last, about seven weeks ago, and the result is very satisfactory. The cavity drained nicely, and Dr. Bruce thinks it entirely filled in, but a little opening remains, and syringing is still done through the opening, and out at the external auditory meatus. During the first week after the operation there was considerable delirium, the patient being noisy and restless, but that disappeared, and he made a satisfactory recovery. One peculiar feature of the pus was the extreme off-iveness of the odor. The roof of the middle ear had been completely destroyed.

Dr. Hamilton asked Dr. Bruce the condition of the reflexes, which were much increased before the operation. Dr. Bruce then examined these, and found them still slightly exaggerated. Ankle clonus was also still slightly present.

Dr. Grasett thought Dr. Bruce ought to present the case again in the fall, when discussion could then take place.

Dr. Orr thought that chronic suppuration had been going on in the middle ear for many years, and that it was extraordinary that there should be such extensive lesion of the bone with so few symptoms.

Dr. Ross referred to the case of a boy who was shot in the temporo-sphenoidal region. A probe demonstrated that the

bullet had gone through the bone. He was perfectly conscious; no symptoms at all, until gradually and slowly he began to get weaker and weaker until he finally died, and on *post mortem* examination one-half of the brain was a great amount of pus.

The Fellows coinciding, Dr. Bruce agreed to the suggestion of Dr. Grasett, that he would give a more extended history of the case early in the fall.

Tumor of Thigh—Clinical Notes. Duodenal Ulcer--Specimens.

Dr. F. Le M. Grasset reported these cases, and presented the specimens. The second was a case of ulcer of the duodenum with rupture into the peritoneal cavity, and death following somewhere within forty-eight hours. It occurred in a domestic servant. The case was first seen by Dr. A. A. Small, and when seen by Dr. Small indicated that there was some trouble in the neighborhood of the appendix. There was dullness in the right flank, and the diagnosis was confirmed a few hours later by Dr. Nevitt. The woman was rapidly approaching a moribund condition, and if something were not done immediately death would intervene. Dr. Grasset then operated, and found everything in the right region normal. There was, however, a collection of fluid like thin green mucilage, the like of which Dr. Grasset had never seen before. He considered there must be a rupture somewhere, and if he had prolonged the incision upwards he thinks he would have found the rupture without any difficulty, but the anesthetist said the patient was collapsing, so Dr. Grasset desisted. The patient died one to one and a half hours afterwards. It was found *post mortem* that rupture had taken place in the duodenum from an old ulcer, probably the day before. Everything she had taken in the way of food went into the stomach, and then into the peritoneal cavity. By external palpation nothing could be felt, she was in such a tympanic state.

The tumor of the thigh was a fatty tumor. The specimen shows that it is broken down, forming a large cyst in the centre and a number of smaller cysts. It produced a large tumor in the back of the woman's thigh, a little above the popliteal region. It had existed there for eight years. Six months before she was seen by Dr. Grasset a doctor attended her in confinement, and during the confinement he noticed this tumor. Six months after this the tumor had grown enormously and there was great pain in the sciatic nerve, and the woman was rapidly becoming a cripple. Dr. Grasset then operated, and had no trouble in enucleating it. A large part of the tumor had lifted up the sciatic nerve and it took considerable time separating the nerve and tumor. The wound healed by first

intention from end to end. Gradually power came back into the limb and the woman got perfectly well. She sat up in the hospital and got an attack of grippe, followed by trouble in the middle ear. From this she recovered. Examination of the tumor by Dr. Anderson and pronounced a lipoma. An interesting feature of the case was the manner in which the tumor was hugged by the sciatic nerve.

Dr. A. A. Small, enlarging on the case of duodenal ulcer, said the patient, a very healthy looking young girl of seventeen years, came to him complaining of nausea and only nausea, for which he prescribed a mild stomachic. He was called to see her early the following morning, when he found her complaining of very severe abdominal pain, which pain was confined to the right inguinal region. She was sent at once to the hospital; and as it was thought that it might be coprostasis a high enema was given, with very slight result. Section was then advised, and the results found as given by Dr. Grasset.

Dr. George A. Bingham spoke in reference to the lipomatous mass. There is danger in connection with these tumors, and mentioned a case of a woman of sixty years who had for twenty years a small mass situated over the anterior aural nerve. Ulceration occurred from irritation of underclothing, and there was general breaking down of the whole mass. The temperature rose to 101 or 102, and there was a slight cardiac murmur also prior to operation. The growth was removed, and for some time after the operation this cardiac murmur persisted. It was probably due to septic endocarditis as a result of absorption, owing to broken down tissue from a simple fatty tumor. This gradually got well and the patient left the hospital recovered.

Dr. Ross referred to a case of duodenal ulcer occurring in his practice. Patient was taken suddenly with pain, with severe hemorrhage from the stomach and died. *Post mortem* showed old duodenal ulcer which had suddenly perforated into a vessel, resulting in death. Also spoke of a case in consultation, a man who for years had very severe hemorrhage from the intestine at long intervals. This case was jocularly referred to as "onionitis," from pieces of green onion being found in peritoneal cavity when operated on. From this the man made a good recovery, but some months after came back to the hospital. He died, and on *post mortem* found old ulcer.

Operation for Deformities—With Photographs.

Dr. George A. Bingham presented photographs and recited the history of this case. A cripple, a young lad of fourteen years, although he looked seventeen, came to the Children's Hospital, having heard of the wonderful surgical operations

done at this institution. From his head to his knees his physical condition was normal, but from his knees down he was not so. This lad had a dog and a sleigh, to which he harnessed the dog and drove down in winter time to the Children's Hospital from Uxbridge, not having other means of getting there and being bound to get there somehow. The right leg below the knee was rudimentary, eight inches in length. There was but one bone, in the leg—the tibia. There were only four metatarsal bones and four toes. The foot was turned, looking directly upward in the direction of the knee. The toes were also webbed. Dr. Bingham amputated at once and obtained an excellent stump. The bones of the left leg were twisted inward. The internal malleolus was lower than the external; as a matter of fact he walked on the internal malleolus. The metatarsal bones were turned inward toward the toe. This leg was perfectly useless, and the problem was what to do with it. Dr. Bingham chiselled the bones and broke them down in order to bring the foot back into proper relation with the leg. There was great difficulty in getting the bones to co-apt properly.

Dr. Meyers' motion to elucidate the meaning of Clause 2, Article IX of the Constitution, fixing the April meeting of each year for the nomination of officers, was carried.

Dr. Pepler, as treasurer, was authorized to remit \$25 to Dr. Conerty, of Smith's Falls, and also to open a subscription list towards a fund for Dr. Conerty from members of the Clinical Society.

GEORGE ELLIOTT,
Recording Secretary.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, J. FERGUSON, T. M. McMAHON, H. J. HAMILTON,
AND INGERSOLL OLMSTED.

Nutrition and Stimulants.

Dr. I. N. Love, of New York, in his address on medicine, before the Mississippi Valley Medical Association (*Jour. Am. Med. Assoc.*, March 2nd), calls attention to some important questions on foods, alcohol and tobacco.

Foods are readily divided into the mineral, such as water, salt, ashes of plants and animals; the carbonaceous or respiratory, such as starch, sugar, fat, etc.—these are heat-giving; the nitrogenous or flesh-forming, tissue-building, as albumin, fibrin, caseine, gluten, etc. Throughout all ages the mineral and respiratory foods are required in full amounts. When the individual has attained full maturity, at about 30, a smaller quantity of nitrogenous food will suffice, and by 40, one-half or one-third the amount of animal consumed during the period of growth will supply the needs of the body. If this regulation of the diet be not observed, the person is very liable to become rheumatic and gouty, with all their evils. Water should be indulged in freely at all periods of life, and fruits and vegetables after mid-life become more than ever necessary.

With regard to alcohol, Dr. Love takes the ground that it is entirely undesirable as a beverage. He is very strong in his opposition to the use of alcoholics by women during nursing. He claims that alcohol has a much worse effect on women than men, owing to their more emotional nervous system. The indulgence in alcohol by women works terrible physical, moral and intellectual ruin. As a food it is of very little value; and, as we have so many good foods, should never be used as such. In acute diseases it is not as much employed as formerly, and is still employed oftener than it ought to be. In the advanced stages of typhoid fever, pneumonia, tuberculosis, and sepsis, it is of undoubted value; but, in many of these cases, we can substitute hot milk, tea, coffee, strychnia, normal salt solution, and other remedies, to advantage. Alcohol has been more abused, more excessively and needlessly used, more misapplied, than any other one remedy.

As to tobacco, smoking to excess is more harmful than chewing, as the nervous system and the mucous membranes are more injured in this form of use. The heavy smoker, owing

to diseased mucous membrane, is more liable to pneumonia, la grippe, tuberculosis, than those who do not smoke, or smoke moderately. Heart trouble is common among those who use tobacco to excess. Cigarette smoking is more injurious than pipe or cigar smoking, because of the fact that a milder tobacco is employed in cigarettes, and the smoker gets into the habit of inhaling the smoke. Children who smoke have their growth seriously interfered with, as the use of tobacco, in the young, deranges digestion, assimilation, elimination, metabolism and lays the foundation for early decay. The excessive use of tobacco has caused many a mental wreck and filled many a suicide's and premature grave. It is one of the prominent duties before the medical profession to inculcate habits of moderation in the use of both alcohol and tobacco.

Poisoning by the Solanine of Potatoes.

Pfuhl, last year, from May 21 to June 1, observed in fifty-six soldiers a marked poisoning, accompanied by chills, fever, headache, abdominal pains, diarrhea, vomiting, vertigo, syncope and in one case convulsions. In most of the patients there was present a yellowish condition of the conjunctiva, and, in some cases, of the skin. The fever fell on the fourth day. In the feces there was found no residuum of potatoes. In the urine there was a little albumen. On the third day, 47 of the patients were able to go on duty again. The treatment consisted of rest in bed, calomel and tincture of opium.

The potatoes, of which the soldiers had been eating, were examined, and it was found that in them the solanine, instead of being .06 per cent., was .38 per cent. in the raw and 24 in the cooked.—Translated from *Giornale Internazionale delle Scienze Mediche*, by HARLEY SMITH.

Encephalic Circulatory Disturbances Associated with Convulsive Phenomena.

Convulsions may originate from direct contact of the convulsive matters with the nerve cell (Vulpian).

The beginning of convulsions seems to have a relation with a disturbance of the cerebral circulation. From experimental and clinical facts it seems to be proved that congestion exists during the convulsions. But that does not prove that congestion is the initial fact which determines the convulsion. From experiments and from clinical facts, it is proved that a short, intense anemia may produce convulsions. When the latter have been brought on, then the anemia is replaced by a congestion arising from the dilatation of the arterioles, and from the filling up of the capillaries and small veins. In some cases the convulsions may be attributed to a complex cause—circulatory

disturbances, associated with a change in the blood cells. In auto-intoxications there may be also contact of the nerve cell with toxic substances. Whatever be the cause and the mechanism which produce the convulsive phenomena, the latter are not produced equally and in a uniform manner in all subjects, since the production and the intensity of the convulsions depend on the convulsive attitude of the subject. This is a fact we ought always to bear in mind, in order to understand the varying reactions of the motor cells with respect to the convulsive agents, which at first seem identical (Dide, of Paris).—Translated from *Giornale Internazionale delle Scienze Mediche*, by HARLEY SMITH.

Spontaneous Ecchymoses in Diseases of the Nervous System (ROUMENTEAU).

Spontaneous ecchymoses are observed in many diseases of the nervous system. Hemophiliacs, arthritics, herpetics are particularly prone to have these subcutaneous manifestations. In diseases of the medulla, the medullary lesions, and especially those of the column of Glarke, make it clear that it is a question of vaso-motor changes. In some diseases of the encephalon, the production of the ecchymoses is due to a vaso-motor paralysis. In the peripheral neuroses and in the neuralgias, the nerve lesions show that the ecchymoses arise from vaso-motor changes. According to the happy expression of Gilles de la Tourette, hysterics and neurasthenics have a real vaso-motor diathesis, which explains the localization of the vascular disturbances. Another case is to be found in the condition of the arteries at the points where the ecchymoses occur. When the arteries have lesions of any sort, the vaso-motor changes produce an arterial hyper-tension, which sometimes leads to the extravasation of corpuscles. This extravasation which, at other times, depends on the rupture of the capillaries, is favored by the lesions of the arteries. These two causes, which act in the same way and simultaneously, explain the genesis of the formation of spontaneous ecchymoses.—Translated from *Giornale Internazionale delle Scienze Mediche*, by HARLEY SMITH.

Hemiplegia.

Dr. David Ferrier, of London, in the *Clinical Journal* for February 20th, directs attention to a few features in the study of hemiplegia of considerable importance from a diagnostic point of view.

When a person stricken down with hemiplegia, whether unconscious or semi-conscious, is examined, there will be conjugate deviation of the eyes. That is, they look to the side of the brain injured, or away from the paralyzed side. This sign soon passes off.

With regard to the paralysis of the face, it should be remembered that in ordinary facial paralysis the person loses power over the palpebral muscle. In hemiplegia the eyelid can be closed, but not so in facial paralysis. When the eyelids are closed forcibly there is some weakness.

When the patient has recovered from the first stage, it will be noticed that the paralysis is not complete in the arm. The fingers, hand and wrist are more affected than the elbow and shoulder. On recovery the shoulder movements return before those of the hand.

In the lower extremity the foot suffers more than the leg, and the leg more than the thigh. The foot is last in regaining its movements, and the last movement of all to return is dorsiflexion of the foot. The recovery is rarely complete, and so some degeneration sets in along the lateral tract. There is late rigidity and increased knee jerk. So also are the periosteal and tendon reflexes of the wrist, elbow and shoulders.

In the toes, especially the big toe, there is a sign of great importance. When the lateral tracts are normal, if the finger nail be drawn along the sole of the foot, the toes are flexed upon the foot. If there is degeneration in the lateral tracts, the toes, and especially the big toe, is slowly extended upon the foot when the nail is drawn along the sole of the foot. This is a valuable means of distinguishing organic from functional paralysis.

When the hemiplegia is functional the face usually escapes. In hysteria the leg is usually more affected than the arm, which is contrary to the rule in organic paralysis. In true hemiplegia the leg is circumducted in attempts at walking, while in the hysterical form the leg is dragged like an inanimate object. In organic cases there is always a good deal of movement about the big joints, shoulder and hip.

When the sensation is affected as well as motion, and the same parts are affected, there is frequently hemianopsia. This is a valuable sign of organic disease. In hysterical hemiplegia, there may be hemianesthesia, but then eye symptoms are crossed amblyopia, with blunting of touch, taste and smell. In the hysterical paralysis the muscle may be excited with the strongest currents and the patient not feel it. The loss of sensation is never so complete as this in organic hemiplegia.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES F. W. ROSS, ALBERT A. MACDONALD,
H. C. SCADDING AND K. C. MCILWRAITH.

Puerperal Infection.

In the April number of the *American Journal of Obstetrics* will be found a long and interesting article on this subject. The object of the study was "to determine the practical value of douching and the indications for diagnosis and treatment that may be drawn from bacterial examinations of the uterine and vaginal secretions and exudates during pregnancy and the puerperium." The work was done in the Department of Pathology, College of Physicians and Surgeons, Columbia University, New York City.

A new "tube" was used for collecting the material for examination. The author states that "care is necessary in the withdrawal of the tube to avoid any flowing of the secretion into the lumen of the tube," but does not say how this is avoided. The success of the technique seems to us to depend on just this point, and we regret that the directions are not more explicit. Some changes were also made in the culture media.

Many of Dr. Wadsworth's experiences agree exactly with our own, *e.g.*: "The number of species found by culture seldom represents the total present, morphologically, in the smears." When found "they were very exceptionally identified." "Organisms were much less frequently present in the lochia, which were collected from the vagina six to twenty-four hours after labor" (than in those collected before labor). "When characters (of organisms) are determined, the standard descriptions for accurate comparison are inadequate." These are some of the numerous difficulties which confront the investigator.

In reference to streptococci, three cases are cited, in which repeated examinations, both before and after labor, demonstrated the presence of streptococci in the vagina. In two of these cases the organisms proved fatal to rabbits, but the puerperium was normal in all these cases.

In reference to douching, douches were used in these three cases, and in others also, and were found quite ineffectual in removing the organisms.

So much for cases in which the puerperium is normal.

In cases in which infection has taken place the author concludes that "a sufficiently accurate diagnosis may be quickly and readily made" (between infection by saphrophytes and infection by septic organisms). We have found on several occasions that the bacterial findings have enabled us to predict

the clinical course of an infection, but we confess that the author's findings rather perplex us. If streptococci, and they, too, fatal to rabbits, can be present in the puerperal vagina without giving rise to symptoms, how are we to tell, when cocci and symptoms are both present, that the symptoms are due to the cocci?

The author decides against routine vaginal douching, favors douching in sapremia, and condemns it in septic infection, all of which is in accord with established practice. K. C. M.

The Causes and Significance of the Obstetric Hemorrhages.

J. Clifton Edgar reviews the above subject ably in the *N. Y. Medical Journal* of March 30th.

The only thing new in it is the author's assertion that a low situation of the placenta is a much more frequent cause of early hemorrhage than is generally supposed. He says:

"From an examination of a large number of membranes and placenta, the result of interruptions of pregnancy in the third, fourth, fifth, and sixth months, I am convinced that hemorrhage due to a low situation of the placenta is much more common than is usually supposed.

I mean, by this, that a large portion of the supposedly simple abortions and miscarriages are really instances of the implantation of the placenta in the lower uterine segment, with resulting hemorrhage and evacuation of the uterus as a consequence of partial separation of the abnormally situated placenta, due to changes in the shape of the lower uterine segment dependent upon the growth of the uterus.

"It is generally thought, and usually taught, that hemorrhage from a placenta previa does not show itself until the twenty-eighth or thirty-second week of gestation. I have in my collection a uterus with the fetus and membranes intact, and a central placenta previa, from a woman who died within a few hours from the first hemorrhage, which occurred at the sixteenth week of pregnancy. A careful autopsy showed that death was due to acute anemia produced by the hemorrhage from the partial separation of the central placenta previa.

"Further, I am convinced that a careful study of the site of rupture of the membranes in instances of supposedly accidental hemorrhage, will prove that hemorrhage during pregnancy, and also during parturition, from the premature separation of a normally situated placenta, is a very, very rare condition indeed.

"I have found that several cases of presumed accidental hemorrhage were really those of lateral placenta previa; a more complete examination after fuller dilatation, and the

examination of the rupture in the membranes *post partum*, indicating the condition that caused the hemorrhage.

"Severe hemorrhage from the partial separation of a normally situated placenta I believe to be a very rare condition; severe hemorrhage from a low implantation of the placenta I believe to be much more common than is generally thought."

K. C. M.

PEDIATRICS.

IN CHARGE OF ALLEN BAINES, W. J. GREIG, AND W. B. THISTLE.

A Case of Meningitis.

Dr. Alfred Stengel, of Philadelphia (*Archives of Pediatrics*), reports a case in a six year old child, coming on suddenly with vomiting and convulsions. On the third day lumbar puncture was performed and one ounce of clear watery fluid removed. Improvement after this was immediate. She used her right side freely, whereas previous to the puncture it had hardly been used at all. Recovery has been continuous, is now almost complete. Case was shown as an example of the improvement that so often follows lumbar puncture.

He also showed a case of osteo-arthritis in a girl of twelve. Right hand exhibited a subluxation of the carpus at the wrist, the metacarpo-phalangeal joints were flexed, and the inter-phalangeal joints were in straight extension. In the left hand, there was marked adduction of the metacarpus and striking projection of the end of the ulna. Joints of the thumb and little finger were enlarged. The big toes were turned under the other toes. He spoke of the diagnosis of this condition from chronic rheumatism and from deformities the result of paralysis. He quoted Garrod as saying that the adduction of the metacarpal bones so common in osteo-arthritis is not seen in the deformities following paralysis.

Dr. Stengel also showed a case of esophageal stricture in a boy of seven years who had drunk lye. Even filiform bougies would not pass the obstruction, which was nine inches from the teeth. The case was interesting in that one half ounce of an emulsion of bismuth was given to the child, and a skiagraph taken shortly after showed the presence of a diverticulum. Kœing's method of treatment of these cases was also referred to.

Poisoning by Vapo-Cresolene. BY ADAMS, OF WASHINGTON
(December, 1900, *Archives*).

A child one year old in coma, with cold, clammy sweat, thought to be dying. Marked pulmonary edema, and had

been passing black urine, but no urine at all had been passed for twenty-four hours. The child had had a cough, and a vapo-cresolene lamp had been recommended. The child had been kept in a small room with the lamp burning for twenty-four hours at a stretch. Recovery took place when it was removed to the fresh air and given plenty of water to drink.

An infant six months old with stridulous respiration, mucous rales over both lungs, cold, clammy sweat and dilated pupils. A vapo-cresolene lamp was burning in the room. The odor of carbolic acid was very perceptible. No smoky urine in this case. This child also recovered when taken into another room and given plenty of water to drink.

These cases are interesting because these lamps are frequently recommended by physicians and thought to be harmless.

Acute Nephritis following Influenza. BY FREEMAN (*Archives*, October, 1900).

A boy four years old, who had had influenza for three years past, about January 1st had the ordinary catarrhal symptoms, prostration, fever and carache of a few hours duration without any discharge. The highest temperature was 105° on February 5th; and on February 9th it varied between 100° and 101°. On that day the child passed some very red urine, which contained blood, albumin, casts, hyaline and hemorrhagic. Blood, albumin and casts disappeared in ten days, and urine was excreted in the normal daily amount of thirty ounces. There was no edema. The child recovered completely.

The author had collected eleven other cases (not all in children) of nephritis following influenza. In this series there were two deaths, and in one in which an autopsy was performed a glomerulo-nephritis was found to be present.

An interesting discussion followed this paper, the majority of the speakers claiming that it was a rare complication. Rotch dwelt on the fact that an acute interstitial nephritis occurs in children, and that this is the usual form after measles or diphtheria, while glomerular follows scarlet fever.

Melena Neonatorum due to the Bacillus Pyocyaneus. W. R. NICHOLSON, JUN. (*Archives*, October, 1900).

Male born at term who was well for sixteen days when a stomatitis developed. On the next day bleeding from the nose and throat occurred, and on the day after the stools contained blood, and clear blood was afterwards frequently passed. Death was due to anemia. Autopsy showed the presence of an acute triple infection, with the staphylococcus pyogenes aureus, bacillus erogenes lactis, and the bacillus pyocyaneus, the latter being

found in the bile and tissues of the liver. The former were supposed to be predisposing causes. Infection presumed to have been through the nipple.

Plantar Reflex in Infants. BY J. L. MORSE (*Pediatrics*, January 1st, 1901).

In view of Babinsky's observations on the plantar reflex, a knowledge of the state of this phenomena in infants is important. Observations made by Babinsky, Cestan and LeLourd, Collier-Cohn, Kalischer, Selusler and others, varied very much. The author examined 254 cases from 1 to 24 months' of age. In 25% of the cases plantar irritation produced flexion of the toes in both feet; in 21% extension on both sides; in 5% flexion on one side and extension on the other; in 35% no reflex. Conclusion—there is no constant plantar reflex during the first year, and while during the second year the reflex approaches more the adult type, it is still inconstant. Therefore no conclusions can be drawn from the presence, absence or character of this reflex in the diagnosis of abnormal conditions.

Congenital Hypertrophic Stenosis of the Pylorus. JAS. H. NICHOLL, Glasgow (*Pediatrics*, February, 1900).

The child was five weeks old. Ever since birth in fifteen or twenty minutes after each meal it would vomit the entire contents of the stomach. This vomiting was not preceded by pain or any stomach symptoms, and after it occurred the child was comfortable until another meal was taken, when the same process was repeated. Emaciation was progressive. Ultimately through the thin abdominal walls there stood out the form of a dilated stomach, across the anterior walls of which peristaltic waves passed frequently. On operation, the pylorus was found represented by a bulky ring of muscular tissue. Loretta's operation was performed, and the infant, which was five weeks old, made a perfect recovery. The symptoms of this condition are vomiting, constipation, emaciation, and the physical signs which, however, can be made out only when the emaciation is marked. They are: 1st. Peristaltic gastric waves; 2nd. Periods of normal dilatation after a meal, alternating with periods (after vomiting) during which the organ may be felt firmly contracted like a ball; 3rd. Marked dilation of the stomach rendered more prominent by the collapsed condition of the rest of the abdomen consequent on the empty state of the bowels; 4th. Pyloric tumor felt by palpation. This, however, has been felt only in a few cases. The article deals very fully with the whole question.

Influence of Organic Phosphorus on the Nutrition of the Young Child.

Cronheim and Muller performed a series of experiments on a year-old child to ascertain the effect of lecithin (in the form here of yelk of egg) on the nutrition of young children. In the first experiment they added the lecithin to the food, and collected all urine and fœces for analysis. Then they gave the same diet to the child, minus the egg, and analyzed the discharges. They conclude that the lecithin favors greatly the assimilation of phosphorus and azote. In the first experiment more than twice the amount of azote and phosphorus taken into the alimentary canal were absorbed than in the second.

Post Nasal Adenoids and Thyroid Disease.

Rivière in *La Medicule Pretique* insists on the close affinity between post nasal adenoids and disease of the thyroid. In 25 per cent. of his cases the children had goitrous ancestors or were themselves troubled with defective action of the thyroid, more especially the grave cases, that is, those in which there is a large amount of nasal discharge, great staphy and backwardness, or those who are very deaf. In several of his cases the children were deaf and dumb, and he notes great improvement in these cases since he began to treat them, and hopes for complete cure. In all the bad cases, whether he can get a history of goitre in the family or case or not, he uses thyroid extract, as well as curretting, and finds he gets much better results than ever before.

Indigestion and Chronic Nose and Ear Disease.

How often are cases of dyspepsia in children seen in which careful dieting and medication alike fail to cure. In these, it would be worth while to look for chronic rhino-pharyngitis or middle ear trouble. The discharges in young children from nose and throat are invariably swallowed, and are capable and often do cause and keep up the indigestion, the effect being due to local imitation from the discharges, as well as to the general systemic condition being below normal. It is a point well worth noting.

Editorials.

CAUSATION OF CANCER AND OTHER GROWTHS.

There has long been a keen debate waged over the etiology of tumors. Some hold that a cancer is malignant from the first moment of its origin, others hold that tumors of benign nature may change their characteristics and become malignant. Prof. J. George Adami, of Montreal, recently delivered an address on the origin and growth of tumors before the Yale University Medical Association, in which he makes some observations of very great importance.

In the first place he reviews the parasitic theory of the origin of cancer. It must be admitted that he makes a fair statement of the case as advocated by those who advance this opinion. The application of special staining methods to the cells has made it appear that "the histological evidence that cancer is due to parasites becomes, to say the least, singularly frail."

The statement is made in the address that a clear line of demarcation cannot be drawn between malignant and benign tumors. All growths that are classified as true tumors may take on the two main features of malignancy, namely, the local invasion of surrounding tissue, and the formations of new growths of like nature in distant organs. In this way enchondroma and lipoma may undergo morphological changes and become malignant; but there can be no doubt "that this sarcomatous tissue is the direct outcome of the cells forming the primary tumor."

There are three ways of viewing the parasitic origin of tumors: that all tumors are caused in this way; that infection is only one of the ways; that tumors begin without parasitic aid, but become infected later. It must be declared at once as without doubt that "there are tumors which assuredly are not of parasitic origin." "We cannot go to the opposite extreme and say that no tumor is due to the action of parasites on the tissues." In the body there are cells of varying degrees of activity and resistance. The toxins produced by parasites, if acting in an energetic manner, may cause necrosis; but, if acting less severely, may give rise to proliferation and growth. From a careful study of the schizomycetes, the coccidia, and

the bilharzia, we must come to the conclusion that parasites may be one of the causes of tumor growths.

In the origin of tumors, we recognize a series of growths, at one extreme of which tumors grow from misplaced tissue without the aid of parasites, while at the other extreme of the series there are growths originating in normal tissues, and growing as the result of irritation induced by parasites. Between these extremes there are growths that approximate and belong to one or the other group. There have been many attempts to find a common bond of union between these two groups. Cohnheim and his followers tried to explain everything in connection with the origin of tumors on the cell "rest" theory. Others again on the parasitic theory. Two problems are to be solved: Certain tumors arise from misplaced cells, certain other tumors arise from cells originally normally placed.

The presence of cell "rests" do not explain the origin of tumors. There is something more required. It is necessary that these cells be acted upon by surrounding influences to establish an active proliferation. There must be a periodic irritation of the cells, and this irritation must be sufficiently prolonged that the relationship of the cell to those in its neighborhood are completely altered. The irritation that has set up the requisite changes in the cell must continue, otherwise the process of new growth would cease, the cells become again latent, or revert to the formation of cells with normal functions. When once the process of abnormal cell formation has been established by continuous periodic irritation, some of these cells wander away from their proper relationships to other cells, and become heterotopic. The continuation of the irritation that started the abnormal cell process creates in the cells a tendency to growth rather than a tendency to work or function.

The microbial theory of the origin of cancer and sarcoma, argues that these organisms and their toxins cause localized cell proliferation. They bring about stimulation and mild irritation, and give rise to that activity in the cells that leads to growth rather than function. The more the cells depart from their normal characteristics, the more active may the microbial toxins become in the way of promoting the new growth. While this is possible, it is by no means necessary that there be microbes or their toxins acting on the tissues. It must be

admitted that if parasites start malignant growths, they do not continue the process, and have not as yet been demonstrated as present. This is quite contrary to what has just been shown, that the irritation starting the growth must continue in operation.

SANITARY CONDITION OF SLEEPING CARS.

The citizens of Canada and the United States have taken considerable pride in our so-called palace sleeping cars. The fittings of the modern sleeper are certainly luxurious, if not gorgeous. During recent months we have noticed many adverse criticisms respecting these same gorgeous trappings, and especially respecting the comfortable plush-covered seats. The *Montreal Star* and the *Toronto World* have joined in a crusade against the sleeping cars. They say that they are badly ventilated, badly heated and unsanitary in many respects. The *World* says that a properly constructed sanitary car should have no plush in it. The woodwork should have a smooth varnished surface, which can be easily kept clean. All the fittings should also be of some kind of varnished or enamelled work, which can be easily kept clean. The *World* goes on to say that, in the modern sleeper, the panellings, ornaments, fret-work and coverings of seats are simply nests of dirt and dust, and consequently dangerous to the health of the passengers. There is really not room for much argument on the subject. When we consider the modern car from an aseptic point of view, we can only arrive at one conclusion, and that it is impossible to keep them absolutely clean. However, a great deal depends on the care that is bestowed upon the cars, and we have reason to think that our modern cars are kept in a fairly clean condition. The most strenuous efforts are put forward to exclude those who are suffering from infectious diseases, and the cars are well cleaned and well ventilated at regular intervals. Moreover, it must be remembered that travellers desire something in the shape of comfort, and a fairly large proportion of them would not be very enthusiastic if they were asked to sit for twelve or twenty-four hours on varnished pine or oak boards. Some would be inclined to compromise the matter by allowing the sanitary cranks to go into the second and third-class cars, where the fittings and trappings are less luxurious.

SMALLPOX IN ONTARIO.

The present outbreak of smallpox in Ontario, of such immediate interest to ourselves, is but an illustration of what a number of States in the Union have been suffering from for two years, and which has now extended to every province of Canada. Smallpox has been so long known and so frequently discussed that the subject seems almost threadbare; but there are some peculiarities about the present epidemic which call for comment. The essential feature of the disease in most outbreaks is the mildness of the attack, which, however, does not seem to have notably lessened the infectious character of the disease. An illustration, which might be multiplied again and again, will show this. The Secretary of the Local Board of Admaston Township, Renfrew County, replies regarding cases as follows:

R. Proctor's son came home, February 15th, from lumber camp in Sudbury, suffering from what the doctor called chickenpox. There were five more cases, mild, in house. Mr. Proctor, aged 65, alone escaped; youngest was 12 years.

At R. Hilliard's were three cases, mild. He is son-in-law of Proctor, and has three-year-old child. Was there when disease was pronounced smallpox and taken home. Fourteen days after child sickened, also father and mother later.

The relation of the disease to vaccination is equally pronounced in illustrating the characteristics of smallpox. Taking as an illustration the Toronto Junction outbreak of January, 1900, Dr. Bryan, who attended the cases, reported as follows:

In the Taylor boarding house were twenty-five persons. Of these thirteen contracted smallpox, four of those being vaccinated, nine unvaccinated. Of the fifteen who did not take smallpox, though exposed for weeks, fourteen were vaccinated and one unvaccinated. This one was successfully vaccinated by me after an indefinite exposure. Of the total cases, six might be termed severe and confluent. These were all unvaccinated, but all recovered. Cases in the vaccinated were very mild; my experience in other outbreaks during the past three years, he states, have been similar to the above.

Many additional illustrations can be given of how vaccination with good lymph, up to the fourth day after exposure, has again and again prevented future cases. On the other hand, a

number of instances have occurred where vaccination performed with an inert lymph have failed to protect against the disease.

The interesting question naturally arises—Why, with these well established facts, have we seen probably half the first cases in the outbreaks of the past year and a half diagnosed as chickenpox, such as in several municipalities in Essex, in Toronto Junction, in Port Arthur, in Sudbury Hospital, in Massey, in Renfrew Hospital, in McNab Township, in Lucan, in London Township, and so on?

Setting aside the case that while many practitioners of the present day, never having seen smallpox, in many instances do not expect it, and in other instances, even if suspicious, are slow to create alarm by calling a comparatively mild eruption smallpox; yet the fact remains that smallpox has always been a very difficult disease to diagnose. Only a year ago the staff of the Winnipeg Hospital were deceived, and a death certificate of purpura hemorrhagica was given to a case of hemorrhagic smallpox, which was seen subsequent to death by the health officer, who diagnosed it, but too late to prevent a serious outbreak arising from the mistake; and similarly, last year, a corpse due to smallpox was unsuspectingly placed in the dissecting room of the Detroit Medical College, causing a serious outbreak. On the other hand, such cases as the following occur. In a lumber camp, whence several mild cases had been sent out to the Sudbury camp, others exposed remained. Two of these men who were friends and worked and slept together, sickened at the same time, and both with equally prominent initial symptoms of smallpox. One developed an abundant rash, while the other practically had none at all. Variations in the cutaneous inflammations and eruptions are so well known in scarlatina, measles, Rotheln, chickenpox, and vaccinia, that there is nothing unusual in finding this in smallpox—the differences having to do perhaps as much with the temperament of the patient as with the type of the disease, as may be seen in the difference in the arms of a series of persons of about the same age, vaccinated by the same operator and with the same lymph.

The variations in type of smallpox have been illustrated in the outbreaks in every camp and district. Thus the history of the family of F—K——, in Renfrew, illustrates this:

A boy, 22 years, came from camp near Sudbury, suffering with what doctors called chickenpox. He remained in Renfrew Hospital until pronounced cured for chickenpox, and then went home to Admaston Township. His father, aged 55, and mother, aged 50, and two brothers and two sisters, the youngest twelve, all took the disease. There was one very severe case, semi-confluent, and the patient, old Mr. K., very sick, and recovered.

Variations of these may be seen in cuts set forth, in a circular on diagnosis issued recently by the Provincial Board of Health.

It is quite apparent, however, that remembering the extraordinary mildness of the present outbreak as regards type, the well-known variations due to temperament, age, surroundings, and general health, and the notable effects of former vaccinations on the disease, every physician must recognize that not only should he preserve a memory-picture of the normal disease, but he must, even more, remember its variations from the normal as influenced by the above conditions. Especially will he by a careful process of exclusion, such as noting the antecedents of the patient for a fortnight or more, his environment at home, his occupation, his previous vaccination, and indeed every circumstance calculated to throw light on the history of the case, determine whether smallpox could have been contracted. Assuming that thereafter any doubts exist, he then must follow hour by hour the progress of the case. From the moment the suspicion crosses his mind he cannot morally neglect to isolate the patient and vaccinate him. In ten days' time, the case, if vaccinated with a clean lymph, will have either taken and shown that the disease was not smallpox, or will have confirmed the diagnosis of smallpox by its being unsuccessful. The clinical histories of some 100 cases, which have been under the supervision of an officer of the Provincial Board of Health in the Tent Hospital at Sudbury will shortly be available for study, and other interesting facts will doubtless be brought out, which will serve, however, only to substantiate the facts so repeatedly made known regarding this disease.

AN ACADEMY OF MEDICINE.

We have advocated, on former occasions, the formation of an Academy of Medicine for Toronto. The time is ripe for such. The various medical societies of the city could perform the present work as sections of the academy. The fee could be placed at such an amount as to enable the academy to publish its transactions in an annual volume. This would have a wholesome and stimulating effect. Many who do not now take any interest in our societies would, if there were such an academy as would result from a union of the several societies. The publication of the proceedings of the sections would give to the work of the academy a stable character, and make the members feel that there was something valuable and permanent in their work. We would suggest that the present societies take the matter up and appoint persons to meet and report a plan of action. J. F.

THE VALUE OF VACCINATION.

At a time like this, when smallpox exists in a number of places throughout the Province, it may not be amiss to review the position of the medical profession on the protective value of vaccination. This is especially important, as there are always a considerable number of the laity who do not believe in vaccination; and a small, but active, minority who are constantly agitating against it. There are in the medical profession a few who doubt its utility, on what grounds, however, it would be difficult to understand.

Such an eminent scientist as Alfred Russell Wallace strenuously opposes vaccination. His main grounds are that it is an interference with the liberty of the citizen. But the imprisonment of a criminal or the isolation of a smallpox patient is an interference with liberty, but for the general good. Another argument of Wallace's is that we have no right to introduce a disease into a person's system in order to prevent one that he may never have. But a moment's reflection will show how short-sighted this objection is. There can be no valid objection

that all should be subjected to a mild illness that a large number may escape a severe and fatal illness. Another argument against vaccination is that there is no scientific warrant that one disease can protect against another. To this it may be answered that the ablest authorities on the question of vaccination, including the immortal Edward Jenner, agree that variola and vaccinia are one and the same disease, and therefore it is a sound position to take that vaccination can protect against variola.

In pre-vaccination days, smallpox was a disease of childhood. Every few years it would spread in epidemic form, attacking all who had not been protected by a previous attack. The mortality was very high, and many who escaped with their lives did so only to be blind, deaf or maimed.

In Prussia, prior to compulsory vaccination in infancy, and re-vaccination at twelve years of age, the death rate was 90 per 100,000 of the population, to which must be added all the disfigurement. Now the death rate is 2 in the same number. In Belgium the death rate was formerly 95 in every 100,000; but since all the school children have to be vaccinated, the death rate has fallen to 3. The records of the Italian army for 30 years show that of those troops who had not been vaccinated, 300 in every 10,000 took smallpox with 50 deaths, whereas among those who were well vaccinated only 5 in 10,000 took the disease, with practically no deaths. At the time of the Franco-Prussian war the Prussian army lost some 400 or 500 soldiers by smallpox, while the French army lost 23,000. In the former the vaccination regulations were very strict, in the latter very lax. The experience taught France a stern lesson, and all her troops are carefully vaccinated, or re-vaccinated on entering the army.

Turn to the experience of Great Britain. On a basis of 1,000,000 of the population the following are the average annual death rates in the respective periods: 1660-79, 4,170; 1728-57, 4,260; 1771-80, 5,020; 1801-10, 2,040; 1831-35, 830; 1838-53, 513; 1854-71, 388; 1872-82, 262; 1885-92, 73. Taking vaccinated and unvaccinated as a means of comparison, we find that in one thousand vaccinated children the attack rate was 5 per cent., and the death rate 0.09. In the unvaccinated the attack rate was 101 and the death rate 44. And

this only tells a small portion of the real difference between the two classes.

Many vaccinations are of no value, owing to the careless manner of their performance, or inert lymph. These persons readily fall victims to the ravages of smallpox, and are quoted as instances of the failure of vaccination. This is entirely unfair. The vaccination must be properly performed to yield protection.

It may be laid down as a rule that careful vaccination in infancy, and re-vaccination at puberty, protects the persons as well as the disease. In the face of all that is known of the great value of vaccination, one would think that there should now be no opposition; and that when a person had to run any reasonable risk of contagion, his first act would be to have himself vaccinated, or re-vaccinated. Among the vaccinated 80 per cent. of the cases are mild, whereas among the unvaccinated 80 per cent. of the cases are severe. One final word. In the case of attendants upon smallpox patients, those who are properly vaccinated and re-vaccinated do not take the disease.

Were it not for vaccination, how could an epidemic of smallpox be brought under control? It will readily appear that this could not be accomplished until the disease had lasted long enough to permit of the recovery of a certain number of persons who could wait upon the new cases. What a slow and costly way this would be, as compared with the thorough and prompt vaccination of the community, and especially the first attendants upon the sick! Many say, "I don't believe in vaccination." For this lack of faith the success of vaccination is largely responsible. It has so reduced the frequency and severity of smallpox that many have lost fear of the disease because they have seen none of its ravages, and have no practical knowledge of the value of vaccination. They begin to think that the absence of smallpox is due to other causes than vaccination. Herein lies their error.

TORONTO CLINICAL SOCIETY.—The following officers were elected for the ensuing year at the regular meeting held May 1st: President, Dr. J. F. W. Ross; Vice-President, Dr. E. E. King; Recording Secretary, Dr. Geo. Elliott; Corresponding Secretary, Dr. A. A. Small; Treasurer, Dr. W. H. Pepler; Council, Drs. Anderson, Hamilton, Bruce, Bingham and Thistle.

SANITARY LEGISLATION.

During the recent session of the Ontario Legislature two important additions were made to our sanitary laws. It has been proved by actual bacteriological experiments that the germ of tuberculosis is one possessed of the greatest vitality, ranking with that of anthrax, and exceeding that of smallpox in its resistance to the action of germicides, and that it may be dried and blown about as dust, and again give rise to fresh colonies. And yet up to the present time the health authorities had no specific power to regulate the location and conduct of sanatoria or boarding houses for cases of tuberculosis. This anomaly has been removed by sections 28 and 29 of the "Act to amend the Statute Law," which provides under a penalty of \$25 per diem that "no sanatorium, institution, or place for the reception, care or treatment of persons suffering from consumption or tuberculosis shall hereafter be established, maintained or kept within 150 yards of an inhabited dwelling, without the owner, manager, or persons to whom the same belongs, having first obtained the consent by resolution given in writing of the local Board of Health of the municipality wherein it is proposed to establish the same."

The other reform was an Act to empower the Government, through the Provincial Board of Health, to make such provisions and regulations as shall tend to limit the spread of disease in the unorganized districts, in lumbering and mining areas; to take early measures of prevention, and to throw on to large and wealthy companies a portion of the responsibility and expense of preventive and remedial measures, which in the past have been a burden and a grievance to the tax-paying public at large, and to neighboring municipalities in particular.

In our next issue we hope to give some interesting details regarding camp life and its sanitary aspect.

A minor amendment to the Public Health Act extends the safeguards regarding impure food to animals affected with "diseases of a cancerous nature" in general.

We congratulate the Legislature, the Government, the Provincial Secretary and the Provincial Board on their fresh evidences of regard for the health interests of the people.

WESTERN UNIVERSITY, LONDON.—The following gentlemen have satisfied the examiners for the diploma of M.D.: Mr. Atkinson, Avon; Mr. Clarke, Mr. Craig, Mr. Doyle, Mr. Elliot, Mr. Fawcett, Mr. Grant, London; Mr. Meek, Port Stanley; Mr. Reason, London; Mr. Rogers, Belmont; Mr. Russell, London; Mr. Smith, Mr. Turner, Dutton. Gold medallist—Mr. I. W. Atkinson, Avon.

DR. RYERSON RECOGNIZED.

LOCKINGE HOUSE, WANTAGE BERKS, March 7, 1901.

DEAR COLONEL RYERSON,—I am very much pleased with the very ample and interesting report that you have furnished to the Red Cross Society. I look forward with great pleasure to the time when, owing to your successful operations on the staff of Lord Roberts, and representing the British Red Cross Society, great harmony will exist between England and the Dominion. Lord Roberts speaks in the highest terms of your services, and I, as Chairman of the Red Cross Society, desire to add my testimony to that of the commander-in-chief.

I must also add my thanks for the deeply interesting pamphlet of your "experiences" during the war, kindly sent to me.

With kind regards, believe me,

Yours very truly,

(Signed) WANTAGE.

P.S.—I am about to send you a proof copy of a photogravure of myself, which has been reproduced, at the wish of some of my friends, from a portrait by Sir William Richmond. I sha'l be very pleased if you will accept it, with my best wishes as a "souvenir."

PRETORIA, 27th February, 1901.

MY DEAR COLONEL RYERSON,—I trust you will pardon me for not writing and thanking you long before this for your very great assistance to us in our difficulties.

I have often intended to write, but I could never secure a time when I could quietly sit down and say to you what was in my mind.

To others who have assisted me I could write appropriate letters of thanks, but you seemed to have placed on me a debt so large that I am unable to repay. I do, however, acknowledge it, and I thank you sincerely in the name of the service to which I belong. You came to this country with most useful stores. You placed them at the disposal of the sick and wounded, when and where most needed. Your work was most untiring and unselfish, and, I fear, will never be appreciated as it should be. I doubt, however, if this last will trouble you much. If I ever visit Canada I will avail myself of the honor and pleasure of calling on you, and I will, I trust, then have a talk over past events.

Believe me, yours sincerely,

(Signed) W. D. WILSON,

*Surgeon-General,
Principal Medical Officer of the Army in South Africa.*

Dr. Ryerson has been gazetted a Knight of Grace of the Order of St. John of Jerusalem in England, in recognition of his services.

The following circular letter speaks for itself: .

COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO.

TORONTO, 19TH APRIL, 1901.

DEAR SIR:

Permit me to call your attention to the resolution of the Medical Council, passed 15th of June, 1900:

"That the Registrar be instructed to carry out the provisions of sub-section 5 of section 44 of R.S.O. 1897, entitled, 'The Ontario Medical Act,' and that after such provisions have been carried out, he notify all whose names have been erased of the provisions of sub-section 6 of said section 44, and that unless they avail themselves of the provisions of said last-mentioned section, that they are liable, under section 46, to all the penalties imposed by the said 'The Ontario Medical Act.'"

The Registrar informs me that you have been duly notified in accordance with above resolution, and that your name has been erased from the Register for non-payment of assessment dues amounting to \$—.

I have been instructed by the Medical Council of Ontario to take proceedings against all unregistered practitioners. I beg to refer you to clause 44, sections 3, 4 and 5, also to clauses 46 and 49 of "The Ontario Medical Act," in reference to the same.

Desiring to give you time to communicate with Dr. Pyne, the Registrar, so that you can reinstate yourself upon the Register, I will after thirty days proceed against you in the usual way as against unregistered practitioners.

(Signed) CHARLES ROSE,

Prosecutor for Coll. Phys. and Surgs. of Ont.

Obituary.

JOHN WANLESS, M.D.

Dr. John Wanless died at his late residence, Toronto, April 14th, aged 88. He was born in Dundee, Scotland, and came to Canada shortly after graduating in medicine. After practising in London, Ontario, for fifteen years, he came to Toronto, where he took a second course in medicine, and graduated, University of Toronto, in 1861, and received the degree of M.D. in the following year. He then went to Montreal, where he remained until 1897, when he returned to Toronto.

JAMES ARCHER WATSON, M.D.

Dr. J. A. Watson, of Toronto, was accidentally killed while horseback riding, April 11. While crossing the C. P. R. tracks at Dundas Street, the horse became frightened by an approaching engine, and, turning suddenly, dashed against the side of the locomotive, striking the bumper beams. Horse and rider were both instantly killed.

Dr. Watson was born in York County in 1856. He was educated in the Weston High School and Trinity Medical College, graduating in 1884. He was an expert horseman, and for many years an active member of the Ontario Jockey Club and the Country and Hunt Club. He was at one time champion of the Toronto Chess League, and was also well known as an expert bowler and lawn tennis player. He had for years a large and laborious practice, and was well liked by his patients. He was unmarried, and is survived by three brothers and one sister. He was buried in Riverside cemetery, Weston, April 13.

CHARLES WILLIAM COVERNTON, M.D., M.R.C.S., Eng.

Dr. Covernton died at his residence, 404 Huron Street, Toronto, April 14th. He was born at Walworth, London, England, August 12th, 1813. His primary education was received in London, and at Boulogne in France, and his professional in London and Edinburgh; M.D., St. Andrew's, 1835; M.R.C.S. (Eng.), 1835, L.S. Apoth., London, 1836. In the latter year he came to Canada for his health, but being pleased with his visit decided to remain. After two years in Vittoria, he moved to Simcoe, where he engaged in active practice until 1878, and then came to Toronto. He was President of the

Council C.P.S.O., in 1871; of the Ontario Medical Association in 1882, and was a member of the Provincial Board of Health from its inception until a year before his death, and was its second Chairman. He was for many years Professor of Hygiene in Trinity Medical College.

Having commenced practice in Canada at the age of 23, Dr. Covernton lived to see many interesting changes and episodes. During the stirring times of 1837 he was for a short time a surgeon in the militia. We have heard him laughingly tell the story of how he unwittingly aided in the escape of Dr. John Rolph; though we believe he did not subsequently regret the incident. It was done in all innocence; he was attending Dr. Rolph's sister, Mrs. Salmon, and at the suggestion of Mr. Salmon, he wrote a letter to Dr. Rolph summoning him to his sister's bedside. Coming from an undoubtedly loyal source, this letter served as a passport through the loyalist lines.

Dr. Covernton and his professional brethren had the mutual satisfaction of his representing them on many occasions during the last decades of his life; on one of these he had the gratification of being one of the forty-five members of the International Congress of Hygiene, presented by our now King to our late beloved Queen. Dr. Covernton was a type of the fine old English gentleman, and generally beloved and respected by the profession. Early in life he married a Dublin lady resident in the County of Norfolk, Frances Elizabeth Williams, whose death we had to deplore some years ago. Of a family of nine there remain to mourn his loss two daughters—Miss Alice Covernton and Mrs. Christopher Baines, of Toronto, and Mr. Carlton Covernton, of Montreal. To them we offer our heartfelt sympathy.

T. H. LITTLE, M.B. (Tor.), M.D. (Vic.)

It is with very deep regret that we announce the death of our friend, Dr. Thomas H. Little.

It always seems specially sad to see an active member of the profession cut down in the midst of his work. The medical profession has supplied its full quota of those who die in the discharge of their duty. The dangers that beset the medical man are neither few nor trifling. He is exposed to all sorts of weather, and at the most untimely hours. He is ever encountering the most virulent forms of infectious and septic poisons, the inception of which into his system may rapidly prove fatal. So it was with Dr. Little. In his professional capacity his advice was sought. The case proved to be smallpox; he contracted it from his patient, and became a victim to a very

virulent attack of the disease. It is peculiarly sad to see one, in the midst of health and energy, and enjoying a large practice that his devotion to his patients had built up, cut down so suddenly.

Dr. Little took his medical course in the medical department of the University of Toronto, and graduated in 1888 as M.B. (Tor.) and M.D. (Vic.). He started practice in Toronto, and soon became deservedly popular. He was held in equally good repute by the profession and the public. We extend to his devoted wife our deepest sympathy.

A word of recognition is due Dr. Sheard. In his capacity of Medical Health Officer he was most assiduous in his attendance upon the deceased. In this we have one more example of the true courage of the physician, who shrinks not from his duty, regardless of the personal danger he encounters.

Personals.

Dr. Hugh Watt, of Fort Steele, B.C., spent a few days in Toronto last month.

Drs. Adam Wright, W. P. Caven, and J. F. Fotheringham sailed for England April 20th.

Dr. Bertram Spencer, of Toronto, has quite recovered from his recent attack of septicemia.

Dr. James Patterson, of Buffalo, came to Toronto, April 9th, to act as best man at the wedding of his brother, Mr. Dickson Patterson.

Dr. Robert J. Dwyer, of Toronto, is still engaged in post-graduate work in London, England. He expects to return to Canada early in June.

Professor Ramsay Wright has been appointed by the Dominion Government to the position of Assistant Director of the Marine Biological Station.

Dr. J. O. Orr leaves for England on the 11th of this month to prosecute his special work in connection with diseases of the eye. He expects to return by the 20th of August.

Henry W. Miller, M.B. '95, has lately been appointed pathologist and clinical director in the Taunton Insane Hospital, Taunton, Mass., after three years special study in other hospitals in Massachusetts.

Dr. Alan Sheppard received a serious injury while playing hockey in Michigan in the second week of March. He came to Toronto a few days ago, and at the time of writing is domiciled at the residence of his mother.

Dr. Edmund E. King, who was confined to his bed for some weeks from an attack of grip, with pleurisy, is now rapidly recovering and able once more to engage in active work.

Dr. John E. Pickard (Tor. '85), Virginia City, Nevada, President of the Nevada State Medical Association, expects to come to Toronto in June, to attend the meeting of the Ontario Medical Association.

Dr. J. T. Fotheringham, of Toronto, left for Manitoba, April 2nd and returned April 11th. While in Winnipeg he saw Dr. Chown, President-elect of the Canadian Medical Association. He learned from Dr. Chown and his friends that the Western physicians continue to take a lively interest in the coming meeting of the Dominion Association in the latter part of August, and are very anxious to greet a large contingent from the Eastern Provinces on that occasion.

The following are officers of University of Toronto Alumni Association local organizations:

Dr. J. S. Sprague, of Stirling, is one of the Vice-Presidents for Hastings County.

Drs. H. A. Yoemans and J. A. Marshall are two of the Councillors for Hastings County.

Dr. M. J. Beeman, of Newburg, and Dr. W. W. Meacham, of Odessa, are two of the Vice-Presidents for Lennox and Addington County.

Dr. F. W. Simpson is one of the Councillors for Lennox and Addington County.

Dr. N. H. McCoy is one of the Vice-Presidents for Lincoln County.

Dr. J. Sheahan is one of the Councillors for Lincoln County.

Drs. H. Meek and W. M. English are two of the Councillors for Middlesex County.

Dr. D. Fraser is one of the Vice-Presidents for Peterborough County.

Dr. J. E. Shaw is one of the Vice-Presidents for Peterborough County.

Dr. W. D. Scott is one of the Councillors for Peterborough County.

Dr. Morley Currie is President for Prince Edward County.

Drs. John W. Wright and A. C. Bowerman are two of the Councillors for Prince Edward County.

Dr. G. M. Aylesworth, of Collingwood, is one of the Vice-Presidents for Simcoe County.

Drs. S. M. Wells, W. H. Clutten, Geo. Hunt, J. C. Evans, and J. A. Ross are among the Councillors for Simcoe County.

Book Reviews.

Self-Examination for Students. P. Blakiston's Son & Co., Philadelphia.
Price, 10c.

This is a small volume of questions on the several subjects of the medical curriculum. These questions are taken from a number of medical college and state examination papers. They furnish the student with a good idea of what he may be expected to know.

International Clinics. A quarterly of clinical and especially prepared articles on medicine, neurology, surgery, therapeutics, pediatrics, pathology, dermatology, diseases of the eye, ear, nose and throat. Edited by HENRY W. CUTTELL, A.M., M.D. Vol. I. Eleventh Series. 1901. Philadelphia: J. B. Lippincott Company.

The International Clinics have been published for over eleven years. Most medical practitioners are familiar with them. The articles in the present volume are of a high order of merit. In addition to the clinical lectures, there are a number of review articles at the end of the volume. These deal with the progress in medicine, surgery, therapeutics, neurology, etc. The make up of the volume is attractive. Good paper, type and illustrations form a prominent feature of the work. The publishers deserve no small share of credit for maintaining such a high standard of merit in these quarterly volumes.

A Manual of Operative Surgery. By LEWIS A. STIMSON, B.A., M.D., Surgeon to the New York and Hudson Street Hospitals; Consulting Surgeon to Bellevue, St. John's, and Christ's Hospitals; Professor of Surgery in Cornell University; Corresponding Member of the Societe de Chirurgie, Paris; and JOHN ROGERS, JUN., B.A., M.D., Surgeon of Gouverneur Hospital, New York; Instructor of Surgery in Cornell University. Fourth and revised edition. With 293 illustrations. Philadelphia: Lea Brothers & Co., 1900.

We have before us the fourth volume of Stimson's "Operative Surgery," and have so recently reviewed the third edition that it is superfluous to make the review detailed. Of this edition we can say, as we did before, that it is one of the best operative surgeries that we know of. It deals with the subject concisely, and illustrates the facts in a manner that is easy of comprehension. It is very beautifully illustrated by black and white cuts, which are accurate enough to bring the subject more vividly to the mind's eye than many pages of text. It is a most useful volume, and we can recommend it as an authority in operative surgery. The general typographical appearances are of the best.

Practical Points in Gynecology. By H. MACNAUGHTON-JONES, Master of Obstetrics (*honoris causa*) Royal University of Ireland, etc. With twelve plates. London: Baillière, Tindall & Cox. Demy 8vo. Price, 4/6 net.

In the words of the author, "These chapters are reprints of a series of communications which appeared in the *Edinburgh Medical Journal*, and which were written for it by the author at the request of the editor." There are six chapters, each giving a clear presentation of a separate subject. Throughout the work there is abundant evidence of the author's large experience, extensive information and sound judgment.

The first chapter, on "Some points in gynecological asepsis," is especially interesting, coming as it does from the pen of one who began his operative career in the earlier days of "Listerism," and who has followed the progress of that system up to the present day. "Some pitfalls in gynecological diagnosis," "The therapeutics of disorders of menstruation," "Conservatism and its influence on operative technique," "Affections of the female genitalia as causal factors in the etiology of neurosis and insanity, and their special bearing on the operative treatment of the insane," "The indications for the operations of hysterectomy and myo-hysterectomy in myoma," are the subjects of the remaining chapters. The plates which illustrate the book are good photographs, well reproduced. We heartily recommend this little book for its operative and therapeutic points.

Appendicitis and its Surgical Treatment, with a Report of One Hundred and Eighty-five Operated Cases. By HERMANN MYNTER, M.D., Copenhagen, Professor of Clinical Surgery in University of Buffalo, Buffalo, N.Y. Third revised edition. Philadelphia: J. B. Lippincott Co.

We have before us the third edition of the above work, which deals with the subject of appendicitis from early historical times to the present, presenting accurately the history of the disease through its many names and stages. The volume was written in 1898 as a thesis for the doctorate degree of the University of Copenhagen. It has been considerably enlarged since its original issue, and brought entirely up to date. It is only two years since the original was written, yet changes have taken place in the opinions on appendicitis. Dr. Mynter has made a most close study of this subject, and his description of the anatomy, histology, physiology and pathology of the appendix is most concise and complete. He has not confined himself entirely to the surgical aspect of the disease, but has examined thoroughly into appendicitis from a medical, as well as a surgical, standpoint. Although it is his belief that it is purely a surgical disease. He devotes considerable space in the

work to the treatment of the disease as adapted by the leading men in the different countries, as Germany, Sweden, France, England, America, etc., and, while their opinions vary somewhat, the general consensus leads to operative interference. We can recommend this work to the profession as one that should be in the hands of every physician, dealing as it does with a disease which occurs with such frequency and with such suddenness that anyone may meet it at any time, and should be prepared at a moment's notice to give an intelligent opinion. The typography, paper and binding are of the usual excellent style of the publishers.

Diseases of the Nose and Throat. By DR. SHURLEY, Detroit. D. Appleton & Co., New York, 1900.

"Of the making of books there is no end," but in the present instance the end is justified, for Dr. Shurly's is really an excellent book. His chapters on hay-fever, tuberculosis of the upper air passages, and deformities of the nasal cavities are especially worthy of notice. The typography is good, and the illustrations what might be expected from the Appleton Company. The colored plates in this, as in other books on the throat, do not represent in any accurate way what is really to be seen, and might as well be left out, for they are liable to mislead the novice. It does not seem possible to get the right coloration in lithographic plates of disease.

The Bastinado as a Resuscitator of the Supposed Dead.

In the January, 1900, number of the *Homeopathic Journal of Obstetrics, Gynecology and Pedology* there is a short paper by Dr. Chas. B. Gilbert, in which he tells how he resuscitated a new-born child that would not breathe under the usual incentives, by vigorously slapping the soles of its feet with the handle of a hair brush. He credits Dr. Carleton, of New York, with originating this mode of treatment, and prints a letter from him. In this he relates how a patient stopped breathing under ether anesthesia, and did not revive, even after the faithful use of artificial respiration, electricity and other means of restoration, and was finally given up as dead as he entered the room. Bethinking himself of the policeman's effective mode of arousing drunks, he seized a slipper that lay handy, had the patient's stockings quickly stripped off, and flayed the soles of both feet as hard and as quickly as he could. Respiration was resumed within less than one minute. This is a simple and effective method, though hardly homeopathic.—*The Medical Council*

Selections.

SURGICAL HINTS.

In bad cases of burns or other severe and painful injuries, it is advantageous to give chloroform for the first dressing, or at least to give a hypodermic injection of morphia. This diminishes the pain and fear, and consequently lessens the shock.

The parents of children with hypertrophied tonsils often object to operation because they think the latter may interfere with the child's voice. This fear is groundless. Explain to the parents that the voice will suffer more from the child's continued bad health than from anything else.

In children with prolapse of the rectum it will often be enough to prescribe the daily use of laxatives; to see that the bowels are only moved while the patient is lying down over a bed-pan, and to strap the buttocks tightly together during the intervals between defecations with a wide strip of adhesive plaster.

It is seldom wise to consent to the parents being present when an operation has to be performed on a child. Children are bound to be terrified when first given an anesthetic, and their cries for help and appeals to their parents are often more than the latter can stand. More than one surgeon has been compelled to defer or even abandon an operation for this reason.

Sometimes in children who have undergone a tracheotomy and have been compelled to wear the tube a long while, it seems very difficult to get them in the habit of using their larynx again. A nervous dread of being without the tube has much to do with this condition. In such cases the surgeon may try occlusion of the tube with a cork, without removing the instrument, and persevering efforts must be made to get the child to talk, or to blow a cheap trumpet, or to blow out a candle.—*International Journal of Surgery.*

Treatment of Labial Carcinoma.

The only proper treatment for cancer of the lip is radical extirpation at the earliest possible moment, associated with removal of the anatomically related lymphatic glands. It is quite true that arsenic is frequently used in these cases. We admit that some cases have been cured by its use, but we consider that this treatment is absolutely improper, because it

entirely neglects the associated lymphatic glands. Whereas some cases have recovered after the local application of arsenic, a very large number of cases must have perished because the adjacent glands were not removed. The treatment is more painful, produces greater disfigurement, is just as dangerous, and is of infinitely less value than is operation by the knife. In every operation the surgeon must aim at radical removal, and in the majority of cases it is perfectly useless to take away the lips and leave the anatomically related glands.—*Da Costa, in Therapeutic Gazette.*

Treatment of Round Ulcer by Washing out the Stomach with a Solution of Perchlorid of Iron.

M. Bourget, in a case of simple ulcer where there had not been hematemesis, washed the stomach with an aqueous solution of perchlorid of iron, to which he generally adds $\frac{1}{2}$ part to 100 of potass. chlor. After evacuation of the stomach contents by the tube, he washes it out with 100 c.c. water; without removing this, he introduces the solution of iron to the amount of 100 to 150 c.c., then removes the whole. This is continued until a litre of the solution has been utilized; in the final evacuation he leaves 60 c.c. in the stomach and places the patient upon the abdomen. After five minutes he makes him take a glass of hot sodae bicarb. solution, 2 parts in 100, to precipitate the remainder of the iron in the stomach. Continue this once a day; in cases of hematemesis twice a day. After the first lavage the hematemesis is much lessened and the pain ceases rapidly. He is not a partisan of the repose of the organ; he feeds his patients with rice, which he considers the best food. He gives it alone or associated with milk, 50 gms. of rice to a litre of milk. After preparing, boil on a sand bath until it is the consistence of thick bouillon.—*Translated for International Medical Magazine from Gaz. des Hop.*

The Pathogenesis of Pellagra.

Babes (*Allg. Wien. Med. Zeit.*) gives the results of his experiments in connection with the study of the cause of pellagra. The writer secured diseased maize from villages in which pellagra was endemic, and had aqueous and alcoholic extracts made from the cereal. The injection of these into mice, rabbits and guinea-pigs convinced him of the toxic action of the extracts. Symptoms similar to those observed in man were often noted, such as loss of appetite, diarrhea, hemorrhages from the bowel, progressive emaciation and weakness, paralysis particularly beginning in the lower extremities, tetanus-like palsies, opisthotonos, and also cutaneous changes, such as falling out of

the hair and desquamation. Confirmatory experiments were undertaken as follows: Serum was secured from a cured woman who had suffered from pellagrous disease, and also from a man with an advanced pellagra cachexia. Two series of animals were inoculated, the one with the plain extract, and the other with the toxic extract mixed with the pellagrous serum. The first series of animals emaciated rapidly and died on the ninth, seventeenth and twenty-ninth days, whilst the second series survived to the thirty-second and sixtieth days, and the third still lives (more than 3 months). As a control test mice and rabbits were injected with (1) pure extract, (2) extract mixed with normal blood serum, and (3) extract mixed with pellagrous blood serum. The first animals died within 12 hours from intestinal hemorrhage; the second died 15 to 17 hours later, and the third survived the injection from 36 hours to 17 days. The animals of the third series did not emaciate, and seemed quite well, whilst the others lost weight and became cachectic. The writer concludes that there is in the blood of pellagrous patients a substance which possesses the property of paralyzing the action of the extract of diseased maize. This substance can be found in the blood of cured pellagra patients or those convalescing from the disease. It possesses specific characteristic properties against spoilt maize derived from pellagra-prevalent regions. Other kinds of serum possess no property of this character. These are the first studies to determine the origin and specific character of pellagra. They give us the experimental ground for vaccination trials, as well as for the prevention and specific treatment of pellagra.—*International Medical Magazine*.

Epilepsy and Adenoids.

Two cases of epilepsy in which marked amelioration followed the removal of enlarged tonsils and adenoids were brought by Mr. Lennox Browne before the last meeting of the British Laryngological Association. While these cases are by no means the first in his experience nor the first reported, Mr. Browne thought it only fair to say that the experience of throat specialists of the benefit of removal of adenoids in this class of cases would appear to be more favorable than that of neurological experts who, presumably, did not attach so much importance to their causal influence. The main point of interest, however, is that while large doses of bromide proved inert prior to removal of the adenoids, the drug, albeit in very small doses, appeared to be essential to complete subsidence of the peripheral irritation due to the glandular overgrowth. Dr. Dundas Grant confirmed the experience of his colleague by reference to the many cases he had seen and treated since his appointment at a special

hospital for nervous diseases; and the president, Mr. Mayo Collier, clinched the matter by pointing out to those who doubted the reasonableness of the association that the point of exit of almost all the cerebral nerves was so closely approximate to the site of the adenoids, that it was a subject for surprise that the causal relationship should ever have been in doubt.—*Med. Press and Circular*.

Anti-Cancerous Serum.

At the Surgical Society M. Regnier communicated some cases of cancer treated by him with the serum of Wlaiev, and with more or less success. Although in no case did he obtain a cure, he succeeded in relieving considerably the patient from the intolerable pain, while the general condition was improved. However, he did not believe any kind of serum would succeed in arresting its evolution. M. Tuffier said that he experimented with the serum of Richel, and found it gave similar results as that claimed for the serum of Wlaiev, and he was inclined to believe that any serum could do no more than produce a general effect on the patient.—*Paris Cor. Med. Press and Circular*.

The "Normal Salt Solution."

There is some variation in the formulæ given by different writers. Dr. Charles A. L. Reed, in his new *Text-book of Gynecology*, remarks that Locke has suggested the following formula and reported favorably upon it:

R. Calcium chloride	3 $\frac{3}{4}$ grains
Potassium chloride	1 $\frac{1}{2}$ grains
Sodium chloride	2 $\frac{1}{2}$ drachms
Sterilized, distilled, or tap water,	
enough to make	1 quart.

M. The solution may be injected subcutaneously, into the intestine, or into a vein.—*New York Medical Journal*.

For Toothache.

Gazette Hebdomadaire de Médecine et de Chirurgie for April 4th ascribes the following to Guillaumin:

R. Crystallized carbolic acid	} equal parts
Menthol	
Cocaine hydrochloride	
Chloral	
Guaiacol	

Triturate in a mortar. A pasty liquid is thus obtained, easy of employment, and both caustic and anesthetic. The caustic action may be augmented by increasing the carbolic acid.—*New York Medical Journal*.

Miscellaneous.

THE TRUE ARISTOCRAT.

In discussing social philosophy, the aristocratic point of view is usually mentioned only to be condemned. But the aristocratic point of view, while it may be one-sided, is not arbitrary. It is the result of natural development and experience. It is founded on the knowledge of human nature, the science of government and the weight of responsibility. The true aristocrat is *grown*, not born or made. He is Nature's handiwork, the product of her methods and processes. Experience, suffering, effort, insight, self-victory, culture, refinement, sensibility, all these contribute to train, discipline and mould the genuine aristocrat. Small wonder that the gentleman, developed by nature in this school, should feel a certain contempt for the levelling tendencies of a Socialistic Democracy. He knows that things cannot be equalized by going down hill, for Nature is "agin" it.

It is a mistake to say that aristocrats live by privilege. No one does this but fools and knaves. The price of privilege is slavery to something or somebody. Endow a man with great estates, and if he does not live soberly and discharge his responsibilities with a reasonable measure of right and justice, he begins to degenerate in health, mind and character. The administration of his estates, or his business, as the case may be, pass into the hands of abler parties by inalienable natural laws.

Such a man may remain the nominal owner, but he is not an aristocrat, and the only privilege he enjoys is that of being a glutton, a libertine and a wine-bibber. Do we really envy men the chance to indulge their lower natures—to commit moral and physical suicide? The forces which pull us down are stronger than those which lift us up. Few of us can afford to do without the continuous spur of necessity. In few is the spirit fine enough to hear whisperings from the other world.

The aristocrat seldom makes any defence of charges made against him. He knows it is natural to the crude and undisciplined to grumble, complain, denounce. He wastes neither time nor breath on deaf ears and near-sighted eyes. He realizes that hatred and envy, misunderstanding and misrepresentation are the price he must pay for his elevation. He knows the inconstant nature of the multitude, their reckless abandonment to the feeling of the moment, the gusts of passion, the hasty acts, the brief repentance, the innumerable mistakes and errors.

which make up their lives. Pity for humanity in bondage to ignorance and passion, climbing the hill from which he looks down with such infinite pains and suffering, comes to soften his indignation.

All personal sense of offence fades from the mind of the true aristocrat. He stands in silent reverence and awe before the working of Nature's inexorable laws and forces.

Truly the arbitrary disposition is to be pitied. Always rushing blindly against these powerful unseen barriers and dams, rising half-stunned but unconscious what hit him, and rushing on with redoubled force and fury, only to catch it again. Such sights as these, while they call forth sympathy and compassion, make the true aristocrat impersonal in his attitude toward men. They enable him to steel his heart, to refrain from meddlesome interference and be willing to seem cruel in order to be kind, in affairs where governing and managerial capacity are called for.

A man is a true aristocrat only when he can say with reverence and truth: "Thy will, not mine, be done," yet work on courageously to the end.—*Indian Medical Record*.

A Warm Bath for a Restless Child.

A warm bath just before going to bed tends to allay the nervous irritability which prevents sleep in children, whether caused by temper or work, and it does so probably by dilating the blood vessels on the surface of the body, and so relieving hyperemia of the brain. A warm mustard foot-bath—an excellent remedy for sleeplessness—is also beneficial through its derivative effects.—*Indian Medical Record*.

A New Aphrodisiac.

The fertility of certain foreign therapeutists in the discovery of new aphrodisiacs is simply extraordinary, for all the world as if there were a ready market for drugs of this class. From a therapeutical point of view aphrodisiacs can have but a very limited field of usefulness; indeed, on thinking the matter over, we are rather at a loss to define ever so limited a field for their employment. The latest addition to the list is Yohimbin, the active principle obtained from a plant growing in equatorial Africa. Experiments have been made with this product on frogs and rabbits, and it is stated to produce marked hyperemia of the sexual apparatus. On this ground it is recommended for the treatment of sexual neurasthenia, and also in albuminuria, though we are unable to follow the train of reasoning which led up to this conclusion.—*Medical Press and Circular*.

Where the Crime of the Christian Scientist Lies.

The disingenuous methods adopted by the supporters of Christian Science were well displayed in a stormy discussion which, according to press reports, took place at a recent meeting of the Society for Medical Jurisprudence. One of the speakers, pleading for "toleration," is reported there to have said: "Why, the very things they do are done in every Protestant and Catholic church in the country. Go into any of them, and if one of their prominent members happens to be sick, you will hear them praying for his recovery without any regard to whether he has a doctor or not." But when has any objection ever been made to Christian Scientists, or any one else, not only praying for the recovery of the sick, but even bringing to bear the influence of the strongest possible suggestion toward it? The Christian Scientists do *not* pray "without any regard to whether he has a doctor or not," or, as we should prefer to express it, without regard to whether all known material or mechanical aids are used, or not. There could not be the remotest objection to their supplementing material and mechanical therapeutic efforts with any mental process they choose to employ. Every Christian, of whatever denomination, daily utters, or should utter, the simple petition, "Give us this day our daily bread," and that, or a similar tribute of reliance upon the Omnipotent One, is used by many who do not profess to be Christians; but none of them considers that that fact justifies him in sitting down idly and folding his hands, without making an effort to attain that for which he prays. Would any Christian Scientist exonerate the guardian of a child, should the child die of starvation because its guardian withheld all food, on the ground that matter was nothing and only Divine Mind fulfilled the process of nutrition and caused the progress of the being in growth and health? Suppose a Christian Scientist's own child were playing in front of a fast-speeding car, and a man standing by did not even stretch out a hand to drag it away, not believing, forsooth, in material measures, but relying solely on the strength of Divine Mind. We should like to hear the Christian Scientist's opinion of that inhuman creature. No. It is not what the Christian Scientist does, it is what he refuses to do, that constitutes his crime against religion, society, the community, and the individual.—*New York Med. Jour.*

THE road to happiness and content in summer leads to Nature, for the closer we get to the bosom of Nature the closer we get to real happiness, where everything is God-made, where things are fresh and sweet and pure, and where we live and come in daily contact with things that appeal to our finest and truest and highest impulses.—*Edward Bok, in the May Ladies' Home Journal.*

AN UNATTACHED SPECIALTY.—The ancient Egyptians were evidently a point or two ahead of us in other things besides pyramid-building. What says Herodotus (Euterpe, lxxxiv)? "The healing art is thus practised among them. Each physician confines himself to one disease, not more. There is an abundance of physicians. Some of them devote themselves to the eyes, some to the head, some to the teeth; others again to the bowels, and still others to more obscure disorders." It is true that in the present day we are once more approaching their level, but even now our specialization is far from complete. The *Lancet* for February 9th quotes the following amusing verses by "J. B." from the *St. George's Hospital Gazette*, detailing the woes of a titled invalid in search of an appropriate specialist:

A tumor he developed on
A spot that's quite neglected;
No specialist for just that point
He anywhere detected.

So curiously was it placed,
That, search from toe to crown,
You saw it not when he stood up,
Still less when he sat down.

From day to day the swelling grew,
So vast became that tumor,
You could not say which was the growth
And which Sir Francis Boomer.

And so at last it finished him,
Despite his numerous staff,
And he explained the cause of death
In this his epitaph:

"My ailment could not treated be,
The times were out of joint;
There was no specialist upon
The Perineal point.

"Some doctors find their work before,
And others theirs behind,
But none devotes attention to
The spot which I've defined."

—*N. Y. Med. Jour*

MAN does not "go to" heaven but he creates his own heaven, and enjoys the happiness and harmony associated with the term in exact proportion to the degree in which he has created them during his life on earth. Many a man still dwelling here experiences daily more of the joys of heaven, so-called, than many others who have passed through the changes we call death. *Margaret Bottome, in the May Ladies' Home Journal.*

The Canadian Practitioner and Review.

VOL. XXVI.

TORONTO, JUNE, 1901.

NO. 6.

Original Communications.

NOTES ON ECLAMPSIA.*

K. C. McILWRAITH, M.B.

Mr. President and Gentlemen :

No obstetrical subject has given rise to more discussion than this one, and yet a review of the literature on this question leads one to think of the words H. W. Longfellow places in the mouth of one of his characters.

"There are many speculations in literature, philosophy and religion (and we might add in medicine) which, though pleasant to walk in, and lying under the shadow of great names, yet lead to no important result. They resemble rather those roads in the western forests of my native land, which, though broad and pleasant at first, and lying beneath the shadow of great branches, finally dwindle to a squirrel track and run up a tree."

Gentlemen, I am afraid that many of the speculations about eclampsia still lead us "up a tree." And yet much good has been accomplished. Many text books still quote the maternal mortality as 30 per cent., while in a recent number of *Obstetrics*, Stroganow gives a series of 58 consecutive cases without any maternal deaths.

Many facts have been ascertained which must stand, no matter what becomes of the theories to which they have given rise, and many methods of treatment have been devised, each of which seems to have application to a certain number of cases. We do not yet know the pathology of eclampsia, but we know

*Read before the Toronto Medical Society.

enough about it to guide us to a system of treatment and to a selection of remedies. Let us consider the pathological anatomy first.

Liver.—Color more yellow than usual. Commencing fatty degeneration. Small hemorrhages, parenchymatous and subcapsular. Areas of necrosis around the portal spaces. Anemia.

Kidneys.—Kidney of pregnancy—The renal condition which is most likely to give rise to eclampsia. Chronic nephritis—more rarely present. Areas of necrosis. Hydronephrosis (sometimes) uninvolved (in about 5 per cent.—Dührssen).

Spleen.—Enlarged, congested, soft. Areas of necrosis. Hemorrhages, parenchymatous and subcapsular.

Brain.—Often anemic and œdematous. Sometimes hyperemic. Sometimes normal. Emboli.

Lungs.—Usually œdematous. Ecchymoses. Emboli.

Heart.—Amyloid degeneration. Cloudy swelling. Fatty degeneration.

Urine.—Albumen and casts. Diminished toxicity.

Blood.—Increased toxicity of serum. In general an anemia of all the organs.

We notice in the pathological anatomy lesions of a similar character and wide distribution, and this leads us to infer that the noxious agent must be distributed by the blood. Further, when we remember the increased toxicity of the blood serum and the diminished toxicity of the urine we infer the presence of a toxin in the serum, and *toxemia* is therefore our first indication for treatment. What the nature and origin of the toxin may be, we do not yet know. Again we notice the general presence of *anemia*; and this is our second clue to the treatment. The hemorrhages in the organs are supposed to result from the convulsions, and therefore the *control of the convulsions* is our third indication.

Let us now go over the other known facts of the disease, and see what information they give us.

PREDISPOSING CAUSES.

Labor pains.—The convulsions occur ante-partum in 25 per cent., during labor in 50 per cent., and post-partum in 25 per cent. *Obstructed delivery*—Old and very young primipare. *Long retention of excretions*. *Over distension of the uterus*. *Nervous temperament*. *Any peripheral stimulation*. *Recur in subsequent pregnancies in about one and one-half per cent*. *More frequent in late autumn and early winter months*. *Convulsions often cease on the death or birth of fetus*.

SYMPTOMS.

1. Prodromal.—(a) Eye symptoms—Amaurosis complete or partial, temporary or persistent (may persist for some weeks—not as a rule permanent). Asthenopia, amblyopia, or diplopia, flashes of light. (b) General Symptoms—Headache, dizziness, tinnitus aurium, drowsiness, nausea, vomiting. (c) Mental.—Depression or excitement. (d) Epigastric Pain—(a) and (b) occur with a fair degree of constancy in about one-fourth of all cases for some hours or some days. (e) Urinary—Alb. casts, diminution of urea. (f) Edema. (g) High tension pulse.

2. Actual.—(a) Convulsions. (b) Fever as case progresses. (c) Edema of lungs. (d) Cerebral-hemorrhage, sometimes long after convulsions have ceased. (f) Frequent high tension pulse.

Nothing in all this list contradicts the conclusions we have already come to, but rather strengthens us in them; and I think we may add one or two things to our indications for treatment. When we consider the influence that labor pains have in bringing on convulsions, it is evident that some treatment should be directed towards them. Our fourth indication, then will be the *control of the labor*.

Nervous temperament undoubtedly has a great influence, and we shall, therefore, add the *control of a hypersensitive nervous system* as our fifth indication for treatment.

CAUSES OF DEATH.

Heart failure. Edema of the lungs. Aspiration pneumonia. Exhaustion. Cerebral hemorrhage. Gastric hemorrhage.

The indications to be taken from these are chiefly of a negative character—to avoid the use of remedies which might lead to heart failure or edema of the lungs, and to reduce pulse tension, which is the cause of the cerebral and gastric, hemorrhages.

To sum up, then, we have to treat: (1) A toxemia; (2) an anemia; (3) to control convulsions; (4) to control labor pains; (5) to control a hypersensitive nervous system; (6) to avoid causing edema of the lungs, heart failure, and high tension pulse.

I have no new remedies to offer, but simply a choice of those which have already been tried. The treatment is mainly that which has been taught for some time by Prof. Wright, and which I have had many opportunities of putting into practice during the last three years.

For the toxemia, elimination by purgation with calomel, accompanied by magnesium sulphate in half-ounce doses of the saturated solution. In antepartum cases this saline purgation, with an occasional dose of calomel, must be kept up until the

child is born. I carried on one of my cases in this way after the patient had had eight convulsions for seven weeks, when a healthy child was born, and thrived. In two cases it happened that when the morning course of salines was omitted, owing to the bowels having moved early in the morning, that convulsions came on again at night. In one of them, after the patient had been kept free from convulsions for a week. Calomel, grms. v, with a drachm of compound jalap powder, as recommended by Jellett, I have also found very useful. In case of unconsciousness, 2 mms. of croton oil may be introduced through a stomach tube.

For anemia the tincture of the acetate of iron with liquor ammonia acetates, or the unmodified Bland's pill have answered very well.

For the control of the convulsions, morphia hypodermically is the most effective and safest remedy; one-half a grain followed by one-quarter at intervals of an hour, if the patient continues restless. In one case I found it necessary to supplement this by a hypodermic of veratrum viride, twenty minims of the fluid, extract. This acted very well, rapidly reducing the tension and frequency of the pulse, and producing free perspiration; uninterrupted recovery ensuing. I should not use this drug, certainly not in such an heroic dose, if there were any signs of heart failure or edema of the lungs.

Control Labor Pains.—The induction of premature labor is contra-indicated, but if labor sets in, hasten it to the close under full anesthesia.

Control of the Nervous System.—In my cases bromide and chloral have not proven satisfactory, threatened convulsions not being kept off by large doses.

Much more satisfactory have been the isolation of the patient and the cutting off of all peripheral stimuli. In one patient who had had a few post-partum convulsions and was apparently quite convalescent a convulsion was started by putting the baby to the breast.

I think that chloroform, chloral, and pilocarpine, are contra-indicated in all cases, owing to their tendency to produce heart failure and edema of lungs. To prevent aspiration pneumonia the patient should be turned on her side during the unconscious stage, and during the convulsion should be prevented from biting her tongue.

To reduce pulse tension glonoin in doses of one minim of the one per cent. solution has given me good results.

This forms the system of treatment. With regard to normal saline solution given subcutaneously, I would say that I found it act very well as a diuretic. In the prolonged unconsciousness which follows the convulsions and their treatment, I think

we should especially remember that our patient can subsist without food, but not without water, which can be conveniently given either beneath the breasts or per rectum.

Bleeding, although often beneficial at the time, tends to prolong convalescence and is certainly not good treatment for the anemia. It may be indicated in cases of over-loading the right side of the heart.

In conclusion I must acknowledge my indebtedness for the pathological anatomy notes to various standard authors, notably the text books of Jellett, Dakin, Dührssen, Lusk, Jewett, Playfair, Winckel, and the "American Text-book of Obstetrics."

MEDICAL ASPECTS OF CANCER OF THE BREAST.*

By DR. WILLIAM ÖSLER.

Surgery has become largely the practice of medicine, and medicine, in part at least, the preliminary practice of surgery, in so far as making the diagnosis for surgeons and handing them our cases for operation. We consulting physicians see a cancer of the breast in two stages, because the patients come to us as the lesser of two evils; they prefer the opinion of the physician, who may possibly tell them that an operation is not necessary, to that of the surgeon whom they fear will surely tell them that an operation is necessary. I see every year three or four cases of cancer of the breast in its early stage, or cases of suspected breast tumor, but the cases to which I wish to call attention this evening form a more important group for the physician to recognize, namely, the late manifestations of cancer of the breast.

Now they may be grouped according to the metastases, for it is through these that we are brought into relation with them, into cerebro-spinal, thoracic and abdominal groups. We will first consider the cerebro-spinal. Owing to the fact that the metastases are almost as frequent in the bones as in any other part of the body, we see a proportionately large number of cases with symptoms pointing either to disease in the cranium, the spinal canal or the vertebræ. That point has not been sufficiently brought out, certainly not by medical writers. Statistics are available now from several of the large German clinics and the percentage is considerable.

The first case that called my attention to the matter was a remarkable one that illustrates the cerebral form of metastasis following breast cancer. Many years ago I was asked to see

* Read at meeting of the Clinical Society of Maryland.

a case with Dr. Agnew, in Philadelphia. The woman suffered with headache, vomiting and progressive coma. She had a double optic neuritis, and it was quite evident that she had a brain tumor. It was not until I saw her the second time that Dr. Agnew remarked: "Why, I forgot altogether that Mrs. R. had cancer of the breast eighteen years ago." On examination there was a hard, firm, scirrhus nodule in the breast. That case is paralleled by many in the literature, and illustrates, too, the fact that often years after a malignant disease has apparently atrophied, a secondary growth may occur. It is the only case, however, out of quite a long series I have had showing pronounced cerebral symptoms.

The spinal group is very much more important, and really forms a very considerable number of all the cases of late metastases in carcinoma of the breast. They are important in the first place because they are very apt indeed to be mistaken for something else. The metastases may occur in the body of the spine or within the spinal membranes, and a very small new growth, as in a case recently seen in the Hopkins, may cause very serious symptoms. I saw a very remarkable case a few years ago with Dr. Pole which interested me extremely, as we had made an error in the diagnosis. The patient had a marked neuralgia of the neck and arm and held her head in a peculiar position, always a little obliquely. On the first visit I did not recognize the condition, but thought it an ordinary cerebro-brachial neuralgia. On the second visit I examined both breasts and found a well marked scirrhus tumor in the left one.

But the cases that are of most interest for the physician are those described by Charcot under the name of *paraplegia dolorosa*, an excellent name. The onset of these spinal symptoms may be early, within a few months after detection of the cancer, or may be delayed for months or years, or, on the other hand, they may occur long before the tumor is recognized. The patient and the physician may not know of the existence of the tumor; an instance of that kind occurred at the Johns Hopkins Hospital in 1894, when a man was brought into Ward C from Union Station, having become completely paraplegic on his way up from Florida. He had had curious symptoms of numbness in the hands and feet, accompanied by burning pains, and his physician, who lived in Massachusetts, had been sent for to bring him home. By the time he reached Baltimore he had become so ill that it was decided to bring him to the hospital. He was stripped for examination, and as he stood up it was quite evident that one breast was very much larger than the other. The patient himself had never noticed this, but palpation showed a firm,

hard, indurated tumor. With the existence of the primary tumor of the breast the painful progressive paraplegia was easily and readily explained. The difficulty in these cases arises from the fact that weeks and months often intervene between the onset of the pain and the development of the paraplegia, and that pain and pain alone is the feature presented by the case for many months. Dr. Thayer may tell us of a case of that kind which he saw last year. Two years, I think, following operation on the breast the patient began to have these pains. She was a nervous, hysterical individual, and these pains were regarded for a time, at any rate, as probably functional and due to her neurotic condition. I saw her first with Dr. Atkinson, and it was not possible then to say what was the trouble. There were no signs of local recurrences although the condition was suggestive. Three weeks ago, when I saw her again with Dr. Atkinson, she had the well characterized features of paraplegia dolorosa. These cases are exceedingly trying because one is in doubt whether he has to deal simply with the pains of a neurasthenic patient, and dreads to give morphia, yet the pains become progressively worse and he has to give morphia ultimately in large doses while he has the feeling, as I have had in some cases, that the patient should have had the morphia and plenty of it very much earlier.

The early symptoms usually are not associated with a scar. They are usually distinct pains, a feeling of tingling and numbness, neuralgia of great intensity and shooting pains down the front or back of the legs, then a slight paraplegia followed by complete paraplegia, but long before this last you have the characteristic retraction of the legs associated with severe pain. The degree of suffering is probably as great as that seen in any other condition in medical practice. Now remember that all this may occur without the slightest sign of a secondary tumor.

A patient died in the Hopkins a few months ago who had these agonizing pains, with paraplegia but no definite tumor, no kiphosis and as a rule you find no evidence of tumor masses in the spinal column, but must accept as the signs of tumor rather the signs of pressure upon the nerve roots as they emerge from the spinal cord. In the case referred to it was found at autopsy that the tumor growing from the membranes and pressing upon the cord was not larger than a walnut. The spinal list is the longest of the cases I have seen, and in scarcely one of my long series was the condition recognized in the early stage. What I wish to emphasize particularly about these cases is that they are, so far as we know, utterly hopeless cases, and just so soon as you can reach a diagnosis give the patient all the comfort and aid that medicine can offer, and

you need not blame yourselves for making them morphine habitues. It gives them relief for a time but you can not cure them.

The thoracic group is next in importance, and naturally owing to the close relation and the liability to involvement of the lymphatics, that group of cases is fairly numerous. Metastasis may occur in the pleura, in the mediastinum or in the lungs. Cases in the pleura are common. There is usually an invasion of the pleural membrane and effusion, and the patient comes with symptoms of pleural exudate requiring tapping, and you may be surprised to find a bloody fluid and the necessity for frequent tapping. These patients may die with little or no distress other than that associated with dyspnea. The pulmonary cases are exceedingly rare. I have seen autopsies showing such things, but do not remember at the moment a clinical case of the kind. Involvement of the mediastinal glands is, next to that of the spine, the condition with perhaps the greatest degree of distress, and when in a year or a few months following the removal of a breast cancer the patient begins to have a cough or dyspnea without signs of effusion in either pleura, then you know, even if the glands above the clavicle are not enlarged, that one of the worst accidents has happened. Those cases, as a rule, are very distressing and die of suffocation. There is increasing pain, dyspnea and pulmonary edema, and fortunately the duration of the illness is shorter than in the spinal cases.

The abdominal group comes next, and first in that we have the hepatic cases. Metastases of the liver are perhaps the most common, if you take into consideration a large series of cases. Large nodular masses can usually be felt or seen, and death is rapid, without much pain.

I want, in conclusion, to draw attention to a very remarkable circumstance in connection with the secondary tumors following breast cancer. You know it occasionally happens, as in the case of Dr. Agnew, which I mentioned, that the tumor of the breast ceases to grow, the fibrous tissue predominates, and the growth becomes a firm, hard, cancerous mass, shrinking to perhaps a third of its original size. It is one of the special characteristics of a scirrhus that it not only tends to increase but that it tends to heal to a certain measure, just as tuberculosis does. If you look at the central portion of a nodule of the liver, it is firm, hard, and has undergone changes that are really conservative and on the road to a healing. In a few of those instances of a secondary growth, one sees remarkable changes that are almost curative; at any rate, they proceed to such a degree that the tumors themselves disappear, and what is more important, the symptoms they cause disappear, and the

patient, who was in an apparently hopeless condition, recovers, gets up, and our grave prognosis was apparently a false one. A number of such cases are on record, and if you should look through both volumes of the index catalogue of the Surgeon-General's Library, you will find some interesting reading on this subject. A few cases are given there in which the secondary tumors have disappeared entirely.

Two cases of interest in this line have come under my observation. Four years ago last September a young woman came from Pennsylvania to consult me about a lump in her breast. I sent her to Dr. Halsted, who in November removed a very large tumor which had already involved the axilla in the right arm so that part of the vein had to be removed. It was an extensive growth, and there was no doubt about its cancerous nature. She did very well, and was soon able to be about, although Dr. Halsted had given a very unfavorable prognosis. Two years ago she came to me again, complaining of pain in the side and a loss of vision in one eye. I was sick at the time, unable to examine her carefully, and as her father was then under the care of Dr. De Schweinitz for a diabetic cataract, I asked her to see him. The doctor sent word back by special delivery letter that the patient had a sarcoma of the choroid. He did not know about the breast tumor that had been removed, but said that "it is a secondary growth, of course, in the choroid, the first I have ever seen, and the twenty-second on record." All the winter she seemed to get worse, and in June, before I went away for my vacation, I went up to see her and bid her good-bye. She was then in very bad condition, with secondary tumors in the other breast, nodules in the liver, loss of power in the legs, and was suffering a very great deal of pain. She was given considerable morphia, and during the fall began to improve so that to my astonishment, when I returned, I found her not only alive but rapidly improving, and she has continued to improve. A year later the tumor nodule in the breast had disappeared, she had regained the power of walking, and what seems more remarkable she was regaining vision in the affected eye. I see Dr. Randolph shaking his head, and I know it is wonderful, but it is not the only remarkable thing in this case. She still has some pain on walking, and has a slight kyphosis about the fourth dorsal, and though she still has to take a great deal of morphia she gets about, and recently drove two miles to the station to meet me.

Now a still more remarkable case you may see walking about Baltimore to-day. It must be about four years ago that a young woman came to me with a tumor of the breast, and I sent her to Dr. Tiffany, who removed the cancer. About this time last year she began to have girdle pains, pains down the

legs, and became completely paraplegic. Dr. Lockwood and Dr. Tiffany, for the time, expected her death any day or hour, but she gradually improved, went to the country, and about four months ago she walked from Union Station to my office. She has some secondary nodules, a stiff back, and has to take a certain amount of morphia, but she is able to be about, and attends card parties and other entertainments for her enjoyment.

Now, these are cases for which you could not do better with treatment by Christian Science, or at St. Ann's, or Lourdes.

DISCUSSION.

Dr. Thayer: The case of paraplegia dolorosa to which Dr. Osler referred was a very interesting one. I first saw her about a year after the operation. She had been much relieved for six months, and then began to have a variety of very distressing nervous symptoms. At first the chief complaint was pain that she could not localize. She would say that she was suffering intensely, but she could not put her hand on the painful area. Her pains were relieved by different simple remedies, such as the coal tar products or codea, and then, all of a sudden, her pains would disappear and she would complain of vague symptoms of unrest, and would walk the floor for hours without any apparent reason. She went through the whole line of hysterical symptoms, and though we suspected that it might be due to a recurrence of the carcinoma we could not be sure of it, and her symptoms made us refuse to give morphia and to put her on the rest cure. She went to Philadelphia for a month or so, without any benefit, and while there her pains became worse, and they began to use small doses of morphia. Later in the Fall, though her pains were much more marked, there was no evidence of a recurrence of the growth, and it has only become evident within the last month or so. The case simply shows how very unpleasant such cases may be for the patient and how difficult it is to decide whether or not to give morphia, or to separate them from their family and friends for rest treatment.

Dr. Jacobs: With reference to cerebral metastasis, I had the pleasure last Summer of seeing a very beautiful specimen exhibited and explained by Dr. Collier, of London. It was a cancer of the brain secondary to cancer of the breast.

With regard to the cases Dr. Osler referred to last, those that apparently recover to a certain extent, a case that has been under my notice for the last two or three years may be of interest. The patient, a friend of mine, was operated upon about two years ago by Dr. Richardson, of Boston, for cancer of the breast. It was an extensive operation, and before the wound healed the patient was complaining of the most intense

pain in one leg. It did not seem located in the joint exactly, but was more particularly along the course of the sciatic nerve. The leg then began to draw up a little, and any movement of it was excruciatingly painful. Dr. Walton was then asked to see the case on account of the nervous symptoms. The leg of the same side as the original cancer was the one involved, and it had wasted away to a small size, with some swelling only at the head of the femur, indicating that the metastasis might be at that point. A year ago it seemed as if she might die at any moment, and when I went away last Summer I bade her good-bye, never expecting to see her again. When I came home in the Fall she was much better, and from that time on has steadily gained a little, until within the last month or two she has been able to be out of bed and to take an interest again in some of her household duties.

Dr. Bloodgood: There is very little to add to Dr. Osler's observations, which make me feel that the surgeon should be a physician and look after the ultimate results of his breast carcinoma cases. At Dr. Halsted's clinic we have had now over 300 cases, but we have been seldom able to observe our cases in regard to metastasis. We have had very few autopsies, as those dying outside of the hospital or out of the city are beyond reach for that purpose. I remember the first one I was ever able to get, for I had to travel thirty miles from here, and then drive ten miles in the country. The few I have had since have been upon patients who, for some reason or other, considered themselves under great obligations to the surgeons and promised an autopsy in the event of death.

I have just been over our records of these cases and they fall into the groups suggested by Dr. Osler, except that metastases of the bones are more rare than I had thought from my reading of the literature—I mean metastases of the bones that manifest themselves clinically, for you may have metastases of the long bones without any clinical manifestations. In this group of 350 cases there are only six of fracture of the neck of the femur, and the probability is that all of these were due to metastases; one case, which I saw myself, I am positive of. The tumor had been removed five years before, and suddenly, after a very slight trauma, a fracture of the neck occurred. Extension was used, but a definite tumor occurred at that point and, later, she died with nodules in other parts of the body.

Recently we have had our first autopsy on the brain in this group of 350 cases. In three cases, after the patients had seemed perfectly well for two or three years, death suddenly occurred after hemiplegia.

Cases of metastases of the abdomen associated with obstruction are very rare; I have only observed one case. They are

most common in the liver and the postperitoneal glands. In only one instance have they broken through and caused obstruction.

The late manifestations of tumors, both carcinoma and sarcoma, are very distressing. There are plenty of instances showing a perfectly healthy condition for five years, and then death occurring from metastasis. We used to think the three-year limit was a fair one to pronounce a cure of either carcinoma or sarcoma, but that has had to be given up. As a rule those that have lived for three years without evidences of local metastasis get well, but every now and then we have seen a case recurring after four, five, or even six years.

Dr. Osler: Dr. Bloodgood's remarks are very interesting, especially with regard to the time limit. That it may exceed three years is a matter to be borne in mind, particularly in view of just such cases as the one I referred to as having been seen with Dr. Atkinson. That woman had been perfectly well, strong, capable and active for so long after the operation that he had himself overlooked the fact that she had this old atrophied scirrhus.

I want to call your attention to a very interesting little book in our library, by Mr. Munn, of Middlesex Hospital, as it contains many interesting points and much valuable clinical information on this subject, and also to another by Dr. Shield, also on carcinoma of the breast.

NEW OBSERVATIONS ON THE TREATMENT OF ANEMIA AND CHLOROSIS.

By F. SONTAG, M.D., OF VIENNA.

For many years attempts have been made to discover a means of promoting the nutrition of the organism in cases of gastric and intestinal diseases and their consequences, in anemia and chlorosis as well as tuberculosis. The chief attention was naturally directed to the albuminous substances, since from the experimental physiology of digestion it appears that these possess the most nutritive value. It was not until the last few years that it was found possible to isolate by chemical means substances necessary for the nutrition of the body from the albumin of muscles. The first attempt in this direction were meat extracts, which, however, in place of albuminoids, contained extractive matter, that is the various organic salts, as well as some peptones. Hence the object sought for was not obtained, the more so since experiments in feeding with extracts led to very unfavorable results. Thus, for instance, of two pigs which were deprived of food in order to determine the amount of disintegration of organic albumin, the one received nothing, while the other was fed on meat extracts, with the result that in the latter the tissue albumin was not spared, as had been expected; but, on the contrary, more rapidly oxidized than in the former animal. This showed that meat extract has no value as a direct nutriment, and that its action is to be sought only in the stimulation of the gastro-intestinal mucous membrane. As a result of further experiments it was thought useful to administer to patients easily digestible proteid combinations obtained by submitting albumins to various stages of artificial digestion, with the expectation that they would thus be rendered fit for immediate absorption. The outcome of these experiments were the peptones, which, aside from their unpalatability, have but slight nutritive value, as they are incapable of being converted into organic albumin in the body.

Recently it has been found possible to prepare an albuminous body in an almost pure form which fulfils all the indications of a true nutritive agent. This preparation, known as somatose, has gained a prominent place among the reconstructives at the disposal of the physician. It contains that form of albumin known as albumoses, that is the deuterio and hetero albumoses, to the amount of 90 per cent. These proteid bodies occupy an intermediate stage between albumins and peptones, are readily assimilable and capable of absorption in the body in their own form, and easily convertible into organic albumin. Somatoes

may be directly utilized in the metabolism and replace other foods. In some cases in which Somatose was the sole nourishment for periods of one or two weeks, I have never been able to note any material loss of weight; on the other hand, its continued use was followed by marked stimulation of the appetite, which of itself was an advantage. Owing to its almost complete freedom from taste, Somatose can be added to all sorts of fluid foods—milk, soups, cocoa, beer, etc., and very large quantities are not required to obtain an effect, which is of inestimable benefit in those cases in which, owing to nervous dyspepsia, there is an aversion of the stomach against all sorts of foods. By the administration of Somatose the organism is supplied with small quantities of a substance which does not tax the digestion, but is easily assimilated. The chief cause of the increase of appetite, however, is the abundance of sodium salts in this preparation which are taken up into the blood, the increased power of the heart, stimulation of the secretions, and the formation of cellular tissue.

In the following I have reported a few cases occurring partly in private and partly in dispensary practice, directing special attention to several instances in which, under the use of Somatose, in daily doses of two to five teaspoonfuls, remarkable success was obtained:

CASE 1.—*Dyspepsia Nervosa*. Miss L. N., forty years old, had suffered for a number of years with gastric disturbances. At the commencement of her trouble she complained of pains in the gastric region following the ingestion of large amounts of food. After six months, however, these pains became so severe that she was not able to bear the pressure of her clothing. Later vomiting appeared, occurring in attacks at regular intervals. Her general condition was wretched. The pains assumed a spasmodic character, lasting frequently for a number of hours, being followed by a spastic hemicrania. Owing to these disturbances she developed a fear of eating to such an extent that she was compelled to remain in bed in consequence of the resulting weakness. She also suffered with constant dizziness, attacks of syncope, and of a feeling of coldness in the hands and feet. Her condition at the time of my first examination, February 15th, 1899, was as follows: The woman was of medium size, slender framework, signs of previous rickets, muscles relaxed, skin, mucous membranes of the mouth, and conjunctiva pale; panniculus adiposus absent, mental depression due to spasmodic attacks in the gastric region; lungs normal, anemic cardiac murmur, abdomen sensitive to the slightest pressure, no palpable tumor, intestines not distended, anorexia, nausea, hysteria, and localized areas of anesthesia; loss of weight thirty pounds, the pulse small and of low tension,

frequency 96. Hemoglobin index, 0.65; blood pressure in the radial 95 mm. Hg. Urinary examination, specific gravity 1020; quantity, almost three pints; color, dark; reaction, neutral; large amounts of nuclealbumin; traces of albumin, abundant phosphates, no sugar. Previous treatment had consisted of nervines and tonics, rest in bed, and the use of the warm pack to the abdomen during the periods of stomach cramps. The treatment adopted by me consisted in the administration of Somatose and a diet of soup with the addition of milk, about one pint daily, and brandy in small amounts. February 25th, the attacks of syncope had been less frequent, pressure in the gastric region not so painful, some appetite, slight nausea, anemic murmur persistent. Since four days no gastric spasms; increase of weight two pounds, pulse frequency 92, hemoglobin index 0.7; blood pressure in the radial artery 105 mm. Hg.; specific gravity of the urine 1029; traces of albumin have slightly disappeared. I ordered cocoa in the morning, bouillon at noon, milk in the afternoon, as well as in the evening, to all of which a teaspoonful of Somatose had been added. March 10th, the patient stated that on February 28th she had been again attacked with stomach cramps, but had a good appetite; no nausea, anemic heart murmur only faintly perceptible, and the sensation of cold in the feet and syncope almost entirely absent. The patient feels well, and desires to get up. Increase of weight since last examination five pounds; pulse frequency reduced to 84; tension higher, hemoglobin index 0.85, blood pressure in the radial 110 mm. Hg.; specific gravity of urine 1018; no albumin or sugar, additional diet permitted; a roll in the morning, and a small slice of veal at midday, and ham in the evening, with one quart of milk in the twenty-four hours. March 30th, stomach cramps had disappeared, no nausea; patient had been out of bed since ten days, no vertigo or feeling of coldness, anemic murmur has disappeared, increase of weight five pounds; pulse vigorous, frequency 78; curve normal, hemoglobin index 0.95; pressure in radial artery 215 mm. Hg.; urine normal. Diet in the morning, cocoa with a roll; at forenoon, some ham; at midday, veal, chicken or beef, with a pint of beer; in the evening, ham, bread and butter, and a pint of beer.

CASE 2.—A girl seventeen years old had suffered for one month with marked chlorosis, which had constantly increased, and was accompanied by vertigo, headache, feeling of lassitude, and severe cardialgia. The bowels were constipated, menstruation absent. At night she complained of a feeling of coldness. Examination on March 2nd, 1899, revealed the following: A girl of delicate build, slight development of muscles; scanty adipose tissue; skin and mucous membranes very pale, no

traces of pulmonary tuberculosis, slight dilatation of the heart, anemic murmurs at the apices, and a bruit over the vessels of the neck; no gastric or intestinal affection, lymphatic glands and spleen not enlarged; evening temperature increased, weight about 105 pounds; pulse of low tension, with a frequency of 108; number of red blood corpuscles 4,500,000; percentage of hemoglobin 60; blood pressure in the radial 90 mm. Hg.; urine pale, specific gravity 1015; contains much nucleoalbumin, but no albumin or sugar. Iron and arsenic alternately were first prescribed, but were not tolerated in any form. Ferro-Somatose was then given in amounts of three teaspoonfuls daily in milk. The diet consisted of tea with graham bread in the morning; soups, vegetables and light farinaceous foods at mid-day, as meat was not tolerated, and in the evening some ham and bread. March 20th, lassitude and weariness have disappeared; pains over the stomach and heart no longer present; evening temperature normal; anemic murmurs and bruit still perceptible; appetite increased, stools regular without laxative; increase of weight, four pounds; pulse of high tension, frequency 90; number of red blood cells, 4,500,000; percentage of hemoglobin 75; blood pressure in radial 105 mm. Hg.; urine yellow; specific gravity 1017; no nucleoalbumin, albumin nor sugar. I prescribed Ferro-Somatose, one teaspoonful in milk in the morning, two teaspoonfuls in soup at noon, and one teaspoonful in tea at night. The diet consisted in the morning of one pint of milk with two rolls; at noon of soups, roast meats (veal, beef or chicken), fruit, four ounces of red wine; at night, milk, tea, bread and ham. April 1st, patient feels much better, appears almost well; menstruation reappeared eight days ago; no vertigo, headache or anemic murmurs; no increase of evening temperature. The patient has been able to follow her vocation since four days without a sign of weariness; stools regular; increase in weight about four pounds; pulse of high tension, strong, and 78 in frequency; number of red blood corpuscles, 4,500,000; percentage of hemoglobin 95; hemoglobin index almost normal; blood pressure in the radial 122 mm. Hg.; urine yellow; specific gravity 1019; no nucleoalbumin, albumin or sugar. Ferro-Somatose was continued, being given only at midday in amounts of two teaspoonfuls in soup; ordinary diet. It may be remarked that in this case the red blood corpuscles did not increase in number; on the other hand, their color was pale at the beginning of treatment, so that they appeared almost yellow.

CASE 3.—A boy, about twelve years old, who had had three attacks of violent scrofulous conjunctivitis, came under treatment in June, 1898, with conjunctivitis eczematosa which had spread to the cornea and gave rise to keratitis. The glands at

the back of the neck were swollen to the size of a hazelnut, soft but not fluctuating. There were also signs of scrofula about the nose and lips. According to the statement of the parents, inflammation of the lids had previously always lasted from three to four months in spite of treatment with cod liver oil. Under the treatment adopted by us, consisting of local applications to the eye and general treatment of the scrofulous condition complete recovery occurred within six weeks. The general treatment consisted in the systematic administration of Ferro-Somatose, two and one-half teaspoonfuls daily, under the use of which the boy gained in weight and presented a better appearance, while the glands of the neck diminished in size, and the inflammatory focus in the cornea subsided with scarcely any cicatricial tissue. No recurrences have taken place.

A number of more cases could be cited, but the three described above are sufficient, since they are typical of a group. In all instances the favorable influence of Somatose upon the general health was clearly perceptible. In connection with the increase of weight, the percentage of hemoglobin increased considerable, and at the same time there was a stimulation of the appetite. Somatose therefore represents a very valuable nutrient, which is serviceable even in apparently hopeless cases. While Ferro-Somatose is a readily absorbable ferruginous preparation, it is especially adapted for the continued administration of iron. It should be remembered that large doses are not necessary to obtain good results, for small and medium size doses (two to four teaspoonfuls daily) on the average, if given systematically for a long time, produce the best effects. Care must also be taken that the Somatose preparations are administered in a completely dissolved state.

Selected Article.

GUN SHOT WOUNDS OF THE CHEST WITH REPORT OF A CASE.*

J. HERBERT AUSTIN, M.D. (TOR.), M.R.C.S. ; ENG., EL PASO, TEXAS.

On the evening of December 26th, 1899, just as the sun went down, there left Oryden station, on the Southern Pacific railroad, two men on an errand of mercy bound.

The night was dark and cold with a chilling wind blowing from the north-west. Well, they knew that their destination lay seventy-five long weary miles away. But the hope that a life, now trembling in the balance, might, as the result of their efforts, be saved, seemed to spur on alike, both horses and riders to do their very best.

For nine hours, from 6 p.m. to 3 a.m., they pressed steadily onward, having in this time travelled fifty miles or more. Rested at a ranch Home Camp until about 6 a.m., then climbed into the saddle and started on the still remaining twenty-five-mile journey, across a very broken rough country.

Reached patient's side about noon, on December 27th, after having ridden seventy-five miles in fifteen hours, using the same horses clear through. Patient had been deliberately shot at a dance, about midnight of December 25th. Weapon used was a thirty-thirty calibre Winchester rifle, held within a few inches of his body. Patient had lost blood by mouth profusely immediately after shooting. He had lain thirty-six hours before I saw him, absolutely without assistance. There was more or less constant hemorrhage from the wounds during this time. He had been shot at anterior part of right shoulder. When shot he was in a stooping position, leaning forward and to right side. Found one quite small opening where rifle ball had entered. Found fracture at outer end of right clavicle. There was a fracture at the anatomical neck of the humerus, and the head of the humerus was very much shattered indeed. Whether these several injuries of the bones at the right shoulder joint were caused solely by the explosive force of the rifle ball, or partly by that and partly by his fall immediately after being shot, I am unable to say. The wound track ranged downward, inward and backward. Found a large, gashing, ugly-looking, irregular wound in the back on the right side. This was evidently the point of exit of part of the rifle ball,

* Read before The El Paso County Medical Society on January 12th, 1901.

etc. This wound was a little above the level of the lower angle of the right scapula and about midway between the inner border of the scapula and the medium line of the vertebral column. There was a peculiar hissing sound of air at every breath from both wounds. Evidently the wound track traversed the right lung for several inches. Examined the wound very cautiously by finger and also by means of probes. Was fearful lest I should start a severe hemorrhage. Extracted pieces of the bone, fragments of the rifle ball, etc., from the wound track. Irrigated thoroughly from the upper opening with a very hot boracic acid solution; this solution came freely through to the lower wound, bringing blood clots, specks of lead, splinters of bone, etc., freely. Packed firmly with iodoform gauze from upper to lower wound. Hurried on the external dressings, fixing fractures as best we could, and got patient to bed, almost bloodless, and in a nearly moribund condition. Wrapped him in hot blankets, used hot drinks freely. Gave hypodermics freely. Did not use alcoholic stimulants. Patient slowly reacted to the measures adopted and rallied from his desperately shocked condition.

Although patient, when wounded, was a young man about thirty years of age, in splendid physical condition, still I could hardly see how he could recover. I fully expected death in a few days from septic pneumonia, and, for some ten days or so he did have a very rapid pulse, high temperatures and rapid respirations, with abundant purulent discharges from the wound in the back.

From that time on he gradually improved. For the first two or three weeks the wound was dressed twice daily. Irrigated thoroughly each time and packed firmly. Patient made a good recovery, the wounds slowly contracting and closing some weeks later and fractures healing nicely. Has little movement at the right shoulder articulation. Is in ordinary health at present.

The result in this case certainly was excellent, and really about all that could be hoped for, and very different from what I expected.

The question constantly before my mind while treating this case was, "Am I doing absolutely what is best in this case?" Is there anything that can be done, or anything being done, which, if stopped, would give this man a better chance for his life?

Hope opinions will be freely expressed along these lines and shall highly appreciate any views put forward. We shall now consider for a short time some points of interest concerning gun shot wounds of the chest. First, let us look at the causes of these wounds; they are legion, from the so-called toy

twenty-two calibre revolver up to the modern artillery of to-day. Of smaller missiles, the solid steel rifle ball has the greatest penetrating force. Have seen one fired into a railroad rail from the side. At the same time, unless penetrating a vital part or organ, it does the least damage to the human organism. Wound track usually closes instantly behind it. Not considering heavier projectiles, the soft-nosed, steel-jacketed rifle ball is the most dangerous missile fired; it always produces a fearful injury, especially a very ragged wound at point of exit.

This was a soft-nosed, steel-jacketed rifle ball, thirty-thirty calibre Winchester. The injuries caused by the different projectiles vary all the way from the types of wounds just mentioned, up to the crushing, lacerating wounds caused by shot and shell from artillery.

There are several points about the symptoms, diagnosis and prognosis of gun shot wounds of the chest that are extremely interesting. Death speedily follows a shot through the heart. Cases are on record where men have made a short run before falling even after being shot through the heart. Wounds of the larger vessels of the thorax are very speedily fatal.

Sometimes there is very little external hemorrhage in such cases. Wounds to the left of the median line of the thorax are far more dangerous to life, as a general rule, because of the presence of the heart and great vessels.

There has recently been in Jaurez a remarkable case. A government official shot himself twice, from before backwards, on the left side, yet did not die. Both balls went through his body and out of his back on the left side. In general wounds from side to side of the body are more dangerous than those from before backwards. We must bear in mind the arch of the diaphragm and consider the possibility of injury of the liver, in the case of a wound from before backward, low down on the right side. On the left side, a wound in a similiar situation may injure the stomach.

These anatomical facts are of the greatest importance when we are considering the diagnosis, prognosis and treatment of a gun-shot wound of the chest. General peritonitis, following injury of the liver or stomach, is what, on more than one occasion, I have seen the post-mortem reveal.

Given a simple through and through wound of the chest, from before backwards, then we must consider the danger of death from shock, or later from septic pneumonia. Now let us consider shortly the treatment of gun-shot wounds of the chest. If perforation of the stomach is suspected, an abdominal section should at once be done, and, any opening found carefully closed; the parts being thoroughly cleaned by irriga-

tion or wiping, as may be deemed best in a given case. If, in a given case, I believed the liver injured I should make an exploratory incision, and try, by thorough cleansing and drainage with gauze, to prevent death from peritonitis. In a given case it may be necessary to tie the internal mammary artery. May have to remove a costal cartilage to expose it sufficiently. An intercostal artery may have to be tied; may have to remove a portion of a rib to reach bleeding spot clearly. In regard to whether an attempt should be made to remove a bullet or other foreign body from a chest wound, I consider every case a law unto itself. Can do so easily in many cases, can not in others, and persistent efforts to do so may cause death when patient otherwise would have recovered.

After a gun shot wound of the chest a patient must be kept absolutely quiet and on a light diet at first. Am a firm believer in persistent irrigation with a hot solution. Consider that firm packing of the wound track with gauze tends to prevent hemorrhage, also to assist the tissues to heal solidly and soundly from within outward. Many of these cases will die when we least expect such a result. Fortunately, on the other hand, patients frequently surprise us by rallying from seemingly hopeless, desperate conditions, and regaining their usual health and strength.—*Kansas Medical Index-Lancet*.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, J. FERGUSON, T. M. McMAHON, H. J. HAMILTON,
AND INGERSOLL OLMSTED.

Treatment of Pneumonia.

Shurley (*Phys. and Surg.*), in discussing treatment of pneumonia, gives preference to ice or ice water in controlling excessive pyrexia, and as an application to the affected lung. Only a very astute diagnostician, however, would require his injunction against applying ice to the thorax before the initial chill. Opium and chloral may be used to control nervous symptoms in the early stages, where no signs of cardiac weakness are present. Whether, in view of the spreading character of many pneumonias, the ice bag is useless after the first few days, is open to question. Alcohol, digitalis, strychnia, his principal stimulants, are not given till need arises, and preferably not till the stage of gray hepatization. Heart failure is met with hypodermic administration of these drugs, nitroglycerin and nitrite of sodium being added. Saline injections and bleeding are not considered; nor is the advisability of trying antipneumococcic serum in suitable cases. Antistreptococcic serum, digitalis, and diuretics are given by the writer in the "so-called infectious pneumonia accompanying influenza." In broncho-pneumonia, tartar emetic, apomorphia, ammonia and opiates are recommended. In one case with meningitis excellent results were obtained from atropia. Nothing new is suggested in the treatment of secondary pneumonia.—*International Medical Magazine*.

Intermittent Lameness.

Goldflam (*Neurol. Centralb.*) has recently published another paper on the peculiar condition called by Charcot intermittent claudication, and by Erb intermittent lameness. The person afflicted with this disorder is unable after walking a short distance to go farther until he has rested and allowed the muscles of the lower limbs to recover from their temporary paralysis. Even when at rest, paresthesia may be experienced in the feet and legs. The disease is the result of thickening of the walls of the blood vessels, although this does not fully explain it. The pulse may be absent in the arteries of the feet. Goldflam's patients were chiefly between thirty and forty years of age, were of the Jewish race, and all were males. Diabetes

does not seem to bear any close relation to intermittent lameness, but a neuropathic diathesis has been present in some cases, and in some instances more than one member of a family have been attacked. Men are more affected, possibly because they are more exposed to dampness and changes of weather, and because they smoke; tobacco, according to Erb, being a potent cause of vascular disease. The treatment is hygienic and dietetic. Over-exertion of the lower limbs, anything that produces vasomotor disturbance, alcohol and tobacco, must be avoided. The feet must be kept dry and warm, etc. Little is to be gained by the use of drugs.—*International Medicine Magazine*.

Frontal Headache and Iodide of Potash.

Since there are various forms of headache, and since the remedy that will relieve one patient will utterly fail to relieve another with seemingly the same kind of head-pain, it is necessary that the physician should be armed with a variety of remedies. For some time past we have found minimum doses of iodide of potassium of great service in frontal headache. A heavy, dull headache, situated over the brow, and accompanied by languor, chilliness, and a feeling of general discomfort, with a distaste for food, which sometimes approaches to nausea, can generally be removed by a two-grain dose of the potassic salt dissolved in half a wineglass of water, and this quietly sipped, the whole quantity being taken in about ten minutes. In many cases the effect of these small doses has been simply wonderful. A person who, a quarter of an hour before, was feeling most miserable and refused all food, wishing only for quietness, would now take a good meal and resume his wonted cheerfulness. The rapidity with which the iodide acts in these cases constitutes its great advantage.

We make no claim of originality in the use of the remedy. If we mistake not, it was an Australian physician who first recommended it. The morbid condition here described is so very common we would invite others to give this remedy a trial.—*Massachusetts Med. Journal*.

Gall Bladder Infection in Typhoid Fever.

Marsden (*Med. Chron.*) reports a case of typhoid fever in which there were early, very severe paroxysmal pains across the lower part of the abdomen. Owing to the extreme tenderness and the delirium of the patient, a satisfactory examination was impossible. It was therefore decided to make an exploratory incision. On opening the abdomen below the umbilicus no evidence of peritonitis was found, but a second incision in the right iliac region revealed several ounces of a dirty greenish

mucoid fluid (limited to the right iliac region), along with a solitary ribbon of what was thought to be lymph, about five inches long and three-quarters of an inch broad. The patient died, and at autopsy the gall bladder was found to be perforated. It was adherent to the colon and omentum, and although it was not distended, it contained considerable fluid. Internally, the mucous membrane was green and pitted with a large number of very small round or elliptical ulcerations. There were no gall stones. Besides the lesions in the gall bladder, there were areas in the liver substance, occupying only small portions of the lobules, where the liver cells had lost their outline and the power of taking stain. In these areas there was an unusual collection of leucocytes, thus constituting infiltrated patches of focal necrosis. Intestinal ulcerations were few and small, although they were present. A culture made from the mucous membrane of the gall bladder developed a motile bacillus which clumped with the blood of a typhoid patient, other tests along with the production of acid and gas, and the growth on potato led to the belief that it was one of the bacillus coli group of a pseudo-typhoid type.—*International Medical Magazine*.

Primary Contracted Kidney. BAUMGARTEN (DR. OSWALD). *Münchener Medicinische Wochenschrift*.

The author passes in review 220 cases of "Primary Contracted Kidney" which have come under his notice in the medical clinic in Berlin. The greatest difficulty in the discovery of etiological factors lies in the gradual and insidious mode of origin of the disease, which is seldom recognized until the conditions of life at its earliest stages have passed out of recollection. It affects *men* much more frequently than *women*, and especially those at the *middle period of life*, more than half the cases coming in the two decades between thirty and fifty. *Heredity* plays but a slight direct part, but indirectly, through the transference of a gouty tendency, it is of considerable importance. Since, however, granular kidneys have been found *post-mortem* upon young, and even newly-born children, a condition of affairs that must be looked upon as the expression of a *congenital* tendency to degeneration of kidney substance, it is readily conceivable that similar changes in a lower degree may lead to the typical development of the disease at a later age.

The association with *gout* is fully recognized, and hence, with the various factors which lead to the gouty state, viz., *chronic lead poisoning* and excessive *indulgence in food and drink*. Undoubtedly exposure to these same pernicious modes of life, and more especially to lead poisoning, may lead to direct

development of interstitial nephritis, without any, or but slight, evidence of gout. The author found in *14 per cent.* of his cases a history of such chronic lead poisoning, whilst other authorities place this form of intoxication still higher as a cause of granular kidneys.

Opinions have differed very widely as to the effect of chronic *alcoholism* in the production of the disease. The author strongly believes that in more than a quarter of the cases under his care this was the main etiological factor, whilst in a number of others it formed one of a combination of causes. In the majority of these cases spirits was the form of alcohol consumed. There was a history of *syphilis* in nearly *10 per cent.* of the cases, but a difficulty is here introduced in the combination of amyloid disease with the granular contraction, and further by the frequency with which excessive drinking is associated with the syphilitic history. Among the remaining causes to which the disease was ascribed frequent *catching cold* amounts to *7 per cent.*, whilst the cases for which *no probable mode of origin* could be assigned amounted to as many as *20 per cent.* of the whole.

The association of granular kidneys with *general arterio-sclerosis* is almost constant, but the exact relation of the two conditions is still a matter of some uncertainty. The two may progress *pari passu* as the result of one and the same cause, or the arterio-sclerosis may be looked upon as the result of the kidney affection, or again the kidney affection is possibly in many cases merely a local expression of arterio-sclerotic changes running ahead of the general tendency to such changes.—*Medical Chronicle.*

SURGERY

IN CHARGE OF EDMUND E. KING, HERBERT A. BRUCE AND L. M. SWEETNAM.

Ulceration of Rectum—Stricture of Rectum.

Samuel G. Grant, M.D., in *N.Y. Med. Jour.*, reports two very interesting and instructive cases of rectal disease.

1. *Chronic Diarrhea Due to Rectal Ulceration.*—The patient, a female, had suffered from frequent stools and tenesmus for five years, during which period every possible nostrum and medicine had been used without improvement. On examination three ulcers were found on the posterior rectal wall, varying in size from a dime to a quarter, the lowest being only three-quarters of an inch above the anus. The sphincter was hypertrophied and contracted tightly, and the mucous membrane throughout highly inflamed. The sphincters were

divulged under general anesthesia, and the denuded surface brushed over with a silver nitrate solution, thirty grains to the ounce. Rest in bed, daily rectal irrigation with antiseptic and stimulating remedies, and a light diet, followed the operation. In six weeks the ulcers were headed and the patient discharged cured. She has been well since.

2. *Stricture of the Rectum Caused by Stone in the Bladder.*—Male, twenty-four years old, had suffered from constipation and diarrhea three years; recently had passed much pus, blood and mucus; much straining was required to expel the feces, though occasionally they passed easily. Recently all the urine had been voided through the rectum, causing smarting pain and inflammation of the skin about the anus. Pain was present in the bladder region. A thick white sediment formed in the urine on standing, composed principally of pus; and on one occasion he had complete retention for twenty-four hours.

There was an almost complete stricture in the rectum. The bowel was ulcerated at this point and acutely inflamed everywhere, as a result of the dribbling urine. The caliber of the bowel was obstructed by a hard, oval, movable mass about the size of a hen's egg. A sound was introduced into the bladder and the diagnosis of stone was thereby confirmed.

Perineal lithotomy was performed after some difficulty; the stone weighed four and a half ounces. The urine passed through the perineal wound for a year after the operation, after which period the wound closed. A bougie was passed through the strictured rectum bi-weekly. The patient was kept under observation for two years, and during the latter ten months of this time was perfectly well.

A. L. W.

Subarachnoid Spinal Cocainization as a Means of Inducing Surgical Anesthesia.

Dr. E. N. Liell, in the *New York Medical Record* of May 11th, 1901, in a very instructive paper on "Subarachnoid Spinal Cocainization as a means of inducing Surgical Anesthesia," reviews the subject very thoroughly. He is of the opinion that this form of anesthesia will become more general in its use as we understand the technique better. There are instances, however, in which the anesthetic result is not obtained, and there appears to be no satisfactory explanation to account for the non-success of the injection. He gives four reasons why we may expect failure to occur.

1. Inert cocain solution, the result of prolonged boiling or repeated sterilization.

2. Idiosyncrasy to the drug, with which may or may not be associated intensely neurotic temperaments.

3. Faulty technique, too short needle, imperfect syringe, non-entrance of needle of fluid into the spinal canal.

4. Too small a quantity of drug employed.

And he also draws attention to the peculiar and disagreeable features accompanying this form of anesthesia.

1. Nausea and vomiting, the latter being rather projectile in character, of short duration usually in the majority of cases.

2. Headache, at times intense, is of frequent occurrence; its severity and duration are variable.

3. Increased temperature in almost every instance, not frequently as high as 103, disappearing within 24 to 36 hours.

4. Increase in pulse rate, appearing shortly after anesthesia is present.

5. Added to these may appear vertigo, pallor, coldness of surface, and prostration. Abstinence from food for several hours previous to the injection tends to minimize attacks of vomiting. To counteract any seeming dangers from this method, the preliminary use of strychnine may be made hypodermically, or of whiskey by the mouth.

The percentage of deaths in these cases is exceedingly low, and under absolutely aseptic precautions in every minute detail will undoubtedly replace general anesthesia in cases that are suitable.

A New Method for Closing Superficial Incised Wounds.

Dr. Arthur G. Bretz (*Medical and Surgical Monitor*) believes the method very simple, and describes it as follows:

Given a wound on the forehead, for instance, after cleansing and preparing it in the usual way, dry the adjacent surface thoroughly and then apply a piece of adhesive plaster on either side of the wound, the size of the plaster and the distance from the edge of the wound to be determined by the length and character of the same. However, it should be of sufficient width to give ample area for adhesion, which should not be less than one-fourth of an inch and not nearer the wound than one-fourth of an inch. Raise the inner edges of the adhesive strips and insert interrupted sutures through them instead of through the skin, draw together and tie. This coapts the edges of the wound even better than stitches through the skin. The wound is then dressed in the usual way.

First, it prevents the painful process of inserting stitches, of which all patients have such a dread.

Secondly, it does away with the possibility of stitch-hole abscess and the trouble caused by particles of sutures being left in the wound on removing the stitches.

Thirdly, it prevents the stitch-marks, which always add to the unsightliness of the scar.

Fourthly, in cases of wounds inflicted by a blunt instrument, which caused bruised tissue immediately surrounding the wound, there are no stitches to tear out the friable tissue.

There is no puckering between the stitches; the first stitches coapt the edges, and the others make the closure permanent. There are many other advantages besides those enumerated above. In the case of semilunar or angular wounds, if the central stitch is wrongly located, it may be easily taken out and replaced. The wound is open for inspection and drainage. In the case of superficial wounds this method is especially advantageous. When the wound is united the adhesive strips should be removed by raising them at their outer edges and pulling toward the wound, or if for any reason it is deemed desirable, the stitches may be removed and the adhesive strips remain for a short period. Furthermore, if it is thought best in order to prevent the slight pressure of the sutures on the surface of the wound, the adhesive strips may be placed a little farther from the edges of the wound, and a folded strip of iodoform or other gauze placed beneath the sutures on either side of the wound. This does not seem to be necessary. In using this method it is necessary to have the best quality of rubber adhesive plaster. If any difficulty should arise, it would not be during the operation if the proper precautions are observed, and the operator possesses ordinary adeptness; and as far as a latter period is concerned, it is evident that the mechanical pressure of the dressing adds to its firmness and permanence. In case the surrounding field is a hairy surface, it is probably unnecessary to state that it should be closely shaven.—*Therapeutic Gazette*.

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF J. PRICE-BROWN.

Perforation of the Nasal Septum, from a Study of Twenty-five Cases.

Charles W. Richardson (*Laryngoscope*, January, 1901), in reading his paper before the New York Academy of Medicine, dwelt upon the etiology and pathological significance of septal perforation. The subject created discussion and brought out several points worthy of note. Of Richardson's cases, eight presented a syphilitic history; eleven followed a tubercular diathesis, although the perforation itself was in no case tubercular; six gave no previous evidence of disease. His own opinion was that the underlying predisposing cause was a destruction of the

innervation of the cartilaginous septum, whereby its power of resistance was so diminished as to allow ulceration and perforation to follow. The immediate cause was considered in many cases to be picking and boring with the finger.

M. Toeplitz drew attention to the injurious effect which working among mercury and arsenic had upon the nasal septum. He had examined thirty-two persons working in a Paris green manufactory, and in every one of them there was more or less marked septal perforation arising from the arsenical fumes.

J. F. McKernon drew attention to the fact that he had seen four cases of septal perforation follow epidemic influenza, and all of them had subsequently developed tuberculosis. He had also seen three cases the result of working in phosphorus in match factories.

Structure and Physiology of the Faucial Tonsil.

Marcel Labbé and Ch. Levi-Sirugue (*La Presse Méd.*, August, 1900), after entering minutely into the biology of this subject in reference to the rabbit and other animals, give an interesting description of the lymphatics of the human tonsil. The beginnings of the lymphatics are in the lymph spaces of the reticulum between the follicles, and in the periphery of the follicles. These lymph spaces are continued by the capillaries and lymphatic vessels, "bounded by a complete wall," which are found in the peritonsillar connective tissue. The authors insist on the "direct continuity of the reticular spaces with the peritonsillar lymphatics."

Like St. Clair Thomson, the authors claim the production of leucocytes to be the chief function of the tonsils.

In the centres of the follicles lymphocytes are transformed into mononuclear leucocytes. In these active karyokinetic changes are seen, therefore the tonsil is to be regarded as a hematopoietic organ analogous to the lymphatic glands. No polynuclear leucocytes are produced in the tonsil; any that are found there have been carried thither in the blood.

These authors do not believe that germs, dust, etc., are absorbed by the tonsils; if such absorption ever does occur, it must be when the epithelial surfaces are broken, and even then goes on very slowly. Neither does the tonsil protect the organism by the production and pouring out of phagocytic polynuclear leucocytes, nor by absorbing and destroying noxious agents, but by aiding other glands in the production of defensive leucocytosis.

That the views of authors are very varied on this subject, is proved by other extracts given from writings of equally eminent men.

A Path of Infection in Man.

Aron (*Wein. Klin. Rundsch.*, November 27, 1900), says that the lacunæ of the tonsil contain the most varied pathogenic bacteria or parasites which, under certain conditions, are able to produce infection of the organism. The author mentions cases of pneumonia with streptococci, and one case of typhoid fever after angina lacunaris.

Rheumatic Fever in Relation to the Throat.

St. Clair Thomson (*Laryngoscope*, January, 1901), advances two different but not necessarily contradictory points of view. The first is, that in many cases of rheumatic fever, the poison enters the system through the tonsil, the inflammation in that organ being the earliest indication of the systemic affection. The second is, that tonsillar inflammation occurs with great frequency in persons of a rheumatic diathesis.

In support of these points many authors are quoted. For instance, Gerhardt calls the tonsil a "physiological wound," which if not maintained in a healthy condition, permits through it a general infection of the system. Jessen records four cases of serious general infection from the tonsils, acute articular rheumatism, acute pyemia, streptococcal pneumonia and staphylococcal pneumonia. In all of these, minute research was made, but no other cause than angina could be discovered for these infections.

St. Clair Thomson here draws attention to the two chief functions of the tonsils. "1. As part of the hemopoietic system they form young leucocytes, most of which pass into the circulation, while some escape on the free epithelial surface, where they may, perhaps, exercise some protective action. 2. They excrete old leucocytes, which probably carry off with them effete products. These two functions are most active in childhood and youth; when all the lymphatic organs are specially active, and when the thymus, a large blood-forming gland, is disappearing." The performance of these two functions, presupposes, of course, a healthy condition.

Pluder maintains that, while the whole mucous membrane has protective powers, the tonsils are its weakest point, and cannot even protect themselves, as shown by their liability to inflammation.

Wagner believes that rheumatic affections are caused by germs migrating from the tonsillar tissues to other parts of the body, and records ten cases in support of this view. Groedel gives twenty-one cases in which tonsillitis has been followed by rheumatic arthritis.

In his Milroy lectures, Newsholme expresses the view that it

is probable that in rheumatic fever the specific infection enters the system at the tonsils, or some other part of the nasopharynx.

As a criticism of these views, Emile Poingt in a *These de Paris*, says that the articular complications which so frequently occur with tonsillitis, should not be confounded with essential acute rheumatism. Renault, another French observer, states that he has never been able to obtain from the administration of salicylate of soda in tonsillitis, sufficient evidence to convince him that the treatment had any specific action as it had in acute rheumatism. And Cobb, from a study of forty-four cases of peritonsillar abscesses, finds that no causative relation could be found to exist between rheumatism and peritonsillar abscess.

Tonsillitis as a rheumatic manifestation frequently occurs, some authors claiming that one-third of the cases arise in patients who have a personal or family history of rheumatic fever.

In closing the article, several conclusions are arrived at, of which the following may be quoted :

1. It is undoubted that a certain number of cases of acute rheumatism are preceded by an angina in a proportion varying from thirty to eighty per cent.

2. Both rheumatism and angina have many etiological points in common, season of year, cold, wet, fatigue, depression, vitiated air, etc.

3. The connection of angina and rheumatism, though undoubted in a number of cases, is not yet clearly established.

4. The tonsil may be the port of entry of the rheumatic virus, and this even although the naked-eye appearance of the throat gives no indication of its being affected.

Tonsillitis Streptothricia.

P. Hellat (*Laryngoscope*, February, 1901). This name has been given to a disease very often observed by the author. He examined about ninety cases of this disease and found the tonsils covered with several kinds of streptothrix. Inoculations on animals and cultures did not succeed. As clinical symptoms of this disease, may be mentioned periodical pains, paresthesia, catarrh of the pharynx and contiguous organs, sensitiveness to pressure and slight swelling of the tonsils, as well as vocal disturbances.

The treatment consists in incising the tonsils and eliminating the streptothrix. The prognosis is good.

Some Symptoms of the Upper Air-Passages in Severe Scarlatina.

Kronenberg (*Wein. Klin. Rundsch*, November 24, 1900) describes cases of purulent rhinitis and suppuration of the

accessory cavities of the nose, and gangrene of the pharynx, consequent upon scarlatina.

Case of Hemorrhage of Vocal Cords.

Charles Parker (*Laryngoscope*, January, 1901) reports a case that occurred in a female teacher, aged 35 years. The hemorrhage was from the middle portion of the upper surface of each cord. The patient complained of hoarseness and aching of the throat after using the voice. There were no signs of hemorrhage occurring elsewhere. The throat of the patient was sensitive and easily strained; and did not yield readily to treatment.

Case of Congenital Web of the Larynx.

Albert McKee, of San Francisco, (*Laryngoscope*, March, 1901) reports the case. The unnatural character of the child's cry was noticed at birth. The statement was made that she was always hoarse; but the larynx was not examined until she was seven years old. The voice had then a peculiar, hoarse, breathy sound; and the larynx showed a pearly web extending from the anterior commissure to the junction of the anterior and middle thirds of the true vocal cords, uniting their margins by a membrane which allowed of a considerable range of motion. The posterior margin of the web was concave, and no sign of inflammatory trouble was present.

Paralysis of the Posticus, Caused by a Foreign Body in the Larynx.

Bruggiser (*Corres. Bl. f. Schweiz Aertze*, Nov. 15, 1900) gives the history of the case. A man aged 24 got an India rubber dental plate with two false teeth attached into the larynx. It was removed eight days later endo-laryngeally. The patient, however, developed a complete paralysis of both crico-arytenoidei postici muscles, probably caused by the pressure, and tracheotomy had to be performed. The author saw the patient again four years afterwards, when the paralyzed condition of the muscles remained the same.

Case of Fracture of the Larynx.

Waggett (*Jour. Lar., Rhin. and Otol.*, January, 1901) showed this case. The patient, a woman aged 52 years, had the thyroid cartilage fractured by severe pinching between the fingers and thumb of a persecutor. Severe dyspnea lasted for some days, external swelling was present, and much pain experienced.

On examination two months after the injury, nothing abnormal could be seen by the mirror. External palpation of the

enlarged larynx caused pain, and indicated the presence of an ununited fracture of the thyroid cartilage, separating the upper half of one ala from its fellow, close to the anterior angle. The fracture was vertical above, curving to the right at its lower end. The semi-detached antero-superior portion of the right ala could be made to ride over the left ala. The voice had altered in character since the receipt of the injury; but the action of the vocal muscles showed no gross sign of impairment. Surgical interference was not intended.

Angeioma of Larynx in a Boy Aged Six Years Removed Under Chloroform by Endolaryngeal Method.

A. J. Brady, of Sydney, New South Wales, (*Jour. of Lar. Rhin. and Otol.*, January, 1901) reports this case on account of the rarity of angeioma of the larynx, and the success attending his method of treatment. The symptoms were dyspnea and bleeding from the mouth. The laryngeal mirror revealed a globular growth about the size of a cherry, below the anterior commissure of the vocal cords. It was of a deep red color and slightly roughened on the surface. It bled readily; the larynx was very irritable, and every time the patient coughed blood was expectorated. Both tonsils were enlarged; there were no adenoids. Attempts to remove it while under the influence of cocaine were unsuccessful, notwithstanding a prolonged training which lasted for more than a month, the cough always returning when laryngeal instruments were inserted. To facilitate operation the tonsils were removed. At last chloroform was administered, and by drawing the tongue forward with a Kirstein's tongue depressor a view of the upper part of the glottis, but not of the growth, could be obtained. Then a Heryng's laryngeal curette was passed into the larynx and drawn upwards over the known site of the growth with moderate pressure three times. Bleeding was slight and some shreds of the growth removed. Subsequent examination showed that all had not been removed; so the operation was repeated ten days later with complete success. The voice became normal, dyspnea subsided, and the growth did not return.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF J. CAVEN, W. GOLDIE, AND G. SILVERTHORN.

An Antiseptic Varnish to Replace Collodion.

The *Journal des Praticiens* attributes the following to Nicaise:

• R	Thymol.....	22½ grains.
	Balsam of tolu.....	75 grains.
	Powdered shellac.....	900 grains.
	Alcohol at 90°.....	750 grains.
	Ether.....	1500 grains.

M.—*N. Y. Med. Jour.*

The Organism of Vaccinia and Variola.

In the *British Medical Journal* of February 23 appear two "Preliminary Notes" upon the specific agent of smallpox and vaccinia. The first is by M. Funck, of Brussels, who promises to give at an early day a detailed report in proof of the following propositions:

1. Vaccinia is not a microbic disease.
2. It is caused by a protozoon easily found in all vaccine pustules, and in all active vaccine.
3. The inoculation of this protozoon in a sterile emulsion reproduces in susceptible animals all the classical symptoms of vaccinia.
4. This inoculation renders the animals refractory to subsequent inoculation with vaccine.
5. The variolous pustule contains a protozoon morphologically similar to that in the vaccine.
6. . . . Vaccinia is an attenuated form of variola. . . .

The questions involved in the first two of these propositions have engaged the attention of many competent investigators, with no very noteworthy results, and one does not find hope of better success in Funck's brief communication.

He arrives at the conclusion that vaccinia is not a microbic disease in this wise: "Having found that twenty samples of vaccine kept in sealed tubes in the dark for three months grew nothing on the ordinary media, but were still capable of producing characteristic vaccine pustules, it follows," he says, "that vaccine freed from microbes (aerobic and anaerobic) produces the specific pustules."

He describes the "sporidium vaccinale" at considerable length as occurring under three forms: 1st, a refracting form of a brilliant green color, spherical, with diameter of two to ten

micromillimeters, and having slow movements; 2nd, ovoid epidermic cells enclosing masses of spherical green bodies ("sporozoa") of smaller size; and 3rd, raspberry-like bodies of considerable size, twenty to thirty-five micromillimeters in diameter, round or oval in shape; encysted spores.

These bodies were described in 1887 by Pfeiffer Funck's method of studying this "sporidium" is to make a hanging drop of glycerinated vaccine and bouillon and place it in a warm, moist chamber. After half an hour the protozoa are said to become attached to the cover slip, the leucocytes and other elements falling toward the point of the drop, so that the protozoa may be conveniently observed.

The inoculation experiments were made with the spore-cysts, which Funck believes that he isolated in the following manner:

Vaccine was spread on ordinary agar plates and incubated for twenty-four hours. After that time he placed the plates under the microscope and dug out the sporoblasts with a platinum needle hammered into spatula form. This spadeful of spores (and things) is made into an emulsion with a drop of bouillon and inoculated into a calf. "When the experiment is properly conducted" characteristic vaccine pustules follow in about six days.

The second preliminary note is from Monckton Copeman, who reported in 1896 some successful cultivations of the micro-organism of vaccinia in eggs. He now hints at a possible explanation of many failures in repeating these experiments. He believes that it is essential that the eggs used for this purpose should be fertilized, and that development of the embryo should begin during incubation.

Since 1898 he has employed the collodion-capsule method of Nocard and Roux. Bouillon capsules inoculated with glycerinated vaccine are placed in the peritoneal cavity of dogs or rabbits, where they remain for about fourteen days. Control capsules immersed in sterile bouillon in test tubes are incubated at the same time. If the collodion envelope remains unbroken, the contents of the capsule are found, after removal, to be free from leucocytes, though containing a trace of serum albumen. Film preparations stained with methylene-blue show numerous zooglea masses, made up apparently of spores, and these, Copeman believes, represent a resting stage of the specific microbe.

The contents of these capsules produce typical vaccinia in the calf, while the contents of the control capsules do not produce vaccinia in the calf.

When it is remembered that the specific agent of vaccinia can be passed through a filter which would surely retain such bodies as are described by Funck, one can hardly expect the

cause of vaccinia to be found among the protozoa. The experiments of Copeman, on the other hand, are encouraging, and his full report will be awaited with much interest.—*Maryland Med. Jour.*

New Researches on Smallpox. ROGER AND WEIL. *Gazete des hopitaux.*

The authors of this article have recently made a series of experiments regarding the transmittibility of smallpox to the lower animals, and also regarding the bacteriology of the disease. The animals employed were rabbits. The inoculations were made into the anterior chamber of the eye as a rule, though sometimes they were made subcutaneously or intravenously. Whilst these different processes did not produce a disease like smallpox in man, they, nevertheless, caused the death of the animal from an infectious process, which presented certain similarities to human smallpox. The most important of these consisted in the blood changes which were similar to those seen in man, and certain changes in the bone marrow, which was also similar to those occurring in the bone marrow of human beings. Intraocular inoculation of vaccinal lymph in the rabbit also produced death with changes similar to those seen after inoculation from smallpox pustules.

Regarding the bacteriology of smallpox, the authors state that besides leucocytes, the contents of the smallpox pustules always contain numerous rounded or oval bodies which stain very strongly with the ordinary coloring matters. They also found these bodies in the blood, though they were more difficult to find here, except in severe cases. In the blood they found the bodies had a little border of protoplasm. The bodies were also found in the sanguinolent effusions of hemorrhagic smallpox, and at autopsies in the different organs, especially in the spleen and the bone marrow. In two autopsies on pregnant women, the bodies were found in the amniotic fluid, and here they seemed to be motile. The authors also found the same bodies in animals inoculated with smallpox. They were able to cultivate them artificially in rabbit's blood, and at the time of their report had grown them as far as the eighteenth generation without any loss of virulence. The authors conclude that these bodies are probably the cause of the disease, and that they, in all probability, belong to the sporozoa.—*Albany Med. Annals, April, 1901.*

The Blood in Cancer and Other Diseases of the Gastro-Intestinal Tract.

Osler and McCrae (*New York Med. Jour.*, May 19th, 1900) reach somewhat different conclusions regarding the blood in

cancer of the stomach. Their conclusions are: (1) In a doubtful case a blood-count below 1,000,000 red-blood cells per c. mm. is strongly in favor of pernicious anemia; (2) while nucleated red-blood corpuscles occur in all very severe anemias; megaloblasts rarely, if ever, occur in cancer of the stomach; (3) neither an increase in the leucocytes nor special variations in the various forms appear to be of any moment in diagnosis of gastric carcinoma; and (4) the presence or absence of a digestion leucocytosis is too uncertain to be of much assistance in diagnosis. One hundred and fifty cases of gastric carcinoma have been considered in reaching these conclusions.

Jez (*Wiener klin. Wochenschr.*, 1898, XLVIII, Nos. 14 and 15) thinks that in gastric carcinoma the many nucleated reds found are to be regarded as an "expression of auto-intoxication."

Hofman (*Zeitschr. für klin. Med.*, 1898, XXXIII., parts 5 and 6, p. 460) and Chadbourne (*Berliner klin. Wochenschr.*, 1898, XXXII., No. 2) think that too much significance should not be attached to the absence of the digestion leucocytosis. Although usually wanting in gastric carcinoma, it may be present, and must be regarded only as evidence of a severe disease, affecting a large area of the gastric mucosa.

Lichty (*Philadelphia Med. Jour.*, February 11th, 1899) considers the relation between the blood, urine and gastric contents in diseases of the stomach. His conclusions are: (1) The average hemoglobin percentage is slightly above normal in hyperchlorhydria, and slightly below normal in hypochlorhydria; (2) the average hemoglobin percentage is greater in cases of gastric achylia than in hyperchlorhydria; and (3) with these exceptions there seems to be no definite relation between diseases of the stomach and the blood and the urine.—*Maryland Med. Jour.*

The Cause of Cancer.

Through the lay press we are credibly informed that Dr. H. R. Gaylord, of the University of Buffalo, has demonstrated beyond dispute the parasitic origin of cancer. It is a pity that such an important subject should be first given to the newspapers, because it is sure to lead to distrust of both the author and his work. It is, however, stated that Dr. Gaylord will publish his paper in the *American Journal of the Medical Sciences*, of Philadelphia, giving a full description of the organism which he describes as belonging to the class of Protozoa, and which he claims to be the sole cause of cancer.

While withholding our judgment for the time being let us remember that Dr. Gaylord claims that cancer is caused by a protozoon or animal parasite, not a bacterial or vegetable one.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES F. W. ROSS, ALBERT A. MACDONALD,
AND K. C. McILWRAITH.

Infant Feeding.

Many magazine articles and text-books have been written on this subject lately. The *American Journal of Obstetrics* for May has a contribution to the subject by Henry Dwight Chapin, M.D. He gives many directions for the conduct of the dairy, and concludes that: "It comes down to a matter of strict cleanliness in the production (collection?) of milk. . . . If you get a baby clean milk you are on the right way for successful infant feeding, but the trouble is we do not commence at the right end. Anything that masks the effect of dirt in milk is bad. The two principal chemical preservatives of milk commonly used are boric acid and formaldehyde. I used sterilization with the others at first in hospital and private practice, and, like most others, I have abandoned it. Why? Because the cases did not do well on it. It breaks up the fine emulsion of milk."

Dr. Zahorsky, who writes in the *St. Louis Medical Review* for April 6th, is an advocate of the Walker-Gordon system. These two writers agree in relying upon cleanliness in dairy methods to prevent infection of the milk, rather than upon subsequent sterilization of it. Dr. Zahorsky believes in laboratory modification, whey and cream mixtures being his favorites. Dr. Chapin believes in the dilution of "top-milk."

We do not believe that exact proportions of fat and proteids can be got by the Walker-Gordon methods. The movement in the direction of securing pure milk we believe to be the greatest advantage that has come to us from the researches on this question.

Suppurative Mastitis in the Newborn.

The mammary enlargement and inflammation which are not infrequently encountered in newborn children of both sexes are phenomena as yet not satisfactorily explained. Just why there should occur such glandular activity shortly after birth is not known, but that it may exist and even advance to actual supuration, as in an instance recently reported by Marvel (*Annals of Gyn. and Ped.*, April, 1901), is a well-recognized fact. As has been suggested, there may be some obscure relationship between the occurrence and certain metabolic changes taking place in the umbilical stump. It may be irritative in character from reflex excitation arising at this point. The theory of direct traumatism of the mammary gland is not proved and

cannot be accepted. There is no substantial evidence in its support. It is true, however, that the suppurative form of the disease is traumatic in origin, and is due to the mal-directed efforts of nurses and midwives to squeeze out the offending discharge. The practical point that is suggested by the occurrence of infantile mammitis, is the necessity of careful handling of the gland, and the avoidance of any attempt at evacuation of the fluid. The absence of a thick pad of pectoral muscle renders the spontaneous rupture of the pus posteriorly into the pleural sac by no means improbable; hence emolient and absorbent applications should constitute the primary treatment with early incision, should pus develop. Above all, should vigorous manipulation of the inflamed organ be avoided in the primary stage of the disease.—*Phila. Med. Jour.*, April 27th, 1901.

The cases of this nature which we have seen have subsided rapidly under the application of a bichlorid poultice of a strength of 1-3000.

K. C. M.

Puerperal Polyneuritis.

Dr. James Stewart, of Montreal, contributes an article on his subject to the *Philadelphia Med. Journ.*, May 4th, 1901. He epitomises the case thus:

A woman, aged 33, after suffering severely from vomiting, began to complain about the seventh or eighth month of her pregnancy of a sensation of numbness in the lower limbs, and shortly afterwards in the upper limbs. This was followed after a period of two months by a slowly increasing motor paralysis of all four extremities, which progressed to practical total disability. The paralysis was of the ascending type, and finally involved the respiratory muscles. The sensation to touch was diminished, but not lost, while the reaction to painful and thermic stimuli was retained. The knee jerks were lost, as well as the plantar reaction. The abdominal reflex was retained. There was considerable muscular atrophy, but no disturbance of the organic reflexes. At first the electrical reactions were normal, but afterwards there was lessening of the Faradic reaction, showing the middle form of the reaction of degeneration. (A full examination of the electric irritability was not carried out, owing to the pain induced). A pneumonia, chiefly owing to the previous paretic state of the respiratory muscles, ended the scene two and one-half days after its onset.

A full account is given of the degenerative changes found in the peripheral nerves and spinal cord. Further, Dr. Stewart writes;

The clinical course makes it highly probable that we had to deal, first, with a neuritis, and later with a localized myelitis (poliomyelitis). The symptoms were, for several months, those

of a neuritis, rather than a poliomyelitis. In fact, at no time were there sufficiently distinctive symptoms present to enable one to say definitely that the spinal cord was involved. It was only the gradual ascending character of the paralysis (Landry type) that some three or four weeks before death gave a clue as to a probable spinal involvement. The development of the symptoms and the appearances met with in the nerves makes it clear that we had to do in the first place with a parenchymatous neuritis. The prolonged primary stage of numbness in all the four extremities, together with a prolonged period of simple weakness of the peripheral muscles pointing to a distal parenchymatous multiple neuritis as the primary lesion. All the common causes of neuritis were absent, as lead, alcohol, acute and chronic infectious diseases, septicemia, etc., etc. What, if any, relation existed between the severe vomiting (pregnancy) and the neuritis, I have no evidence to show. A number of cases of puerperal neuritis have been reported, in which vomiting had been very severe, and the only marked feature present. Dr. Whitfield, in the *Lancet* (March 30th, 1889), gives an account of such a case. Dr. E. S. Reynolds (*British Med. Journ.*, vol. 2, 1897, p. 1080) narrates a case of paraplegia after labor, which he attributes to a peripheral neuritis, and in which abortion was performed on account of vomiting. He refers to a view held by Clifford Allbut, who looks upon the vomiting of pregnancy as due to a toxin, and that the same toxin may induce a neuritis. In the considerable number of cases of multiple neuritis of puerperal origin, very few have been reported in which the onset occurred during pregnancy, nearly all being instances of post-partum neuritis, which usually is attributed to sepsis.

OPHTHALMOLOGY AND OTOTOLOGY.

IN CHARGE OF G. STERLING RYERSON, J. T. DUNCAN AND J. O. ORR.

A Plea for the Earlier Recognition of Squint in Children by the Family Physician.

Veasey states, in the *Medical News*, that the family physician as a rule, has his attention directed to this condition shortly after its appearance. If he is indifferent, and says, "Oh, the child will outgrow it, let it alone," in most cases the squint will become permanent, and a portion of the visual acuity of one eye may be lost. On the contrary, if the proper treatment be instituted, much can be done towards relieving the deformity, and at the same time preserving the useful vision of both eyes.

The condition is generally brought about by some error of refraction. The first thing, then, is to determine whether or not this is the case. In order to do this, a solution of atropin may be used, four grains to the ounce, a drop in each eye night and morning. Let the child wear dark glasses if old enough. If the squint disappears under the atropin, it proves that an error of refraction is present in the case. Then the patient should be carefully glassed. If the patient is too young to wear glasses, the atropin instillations—half strength—may be continued until he is old enough to do so. The author has put glasses on a child three years of age (with great benefit to the squint), but the usual age at which a patient will wear glasses is three and a half up to five years.

In many cases, the use of glasses has completely corrected the squint in a short period of time.

If the wearing of glasses fail to correct the defect, a system of orthoptic gymnastics, known as "orthoptic exercises" should be employed, and these failing, operation may be resorted to.

The Accommodation of the Human Eye.

W. Schoen (*Archives d'Ophthalmologie* abstracted in the *Post-Graduate*) attacks the Helmholtz theory of accommodation, and presents a new one in place of it. As every one knows, in accommodation for the near, according to Helmholtz, the suspensory ligament (Zonule of Zinn) is relaxed. This relaxation allows the lens to bulge forward. When the zonule resumes its tense condition, the lens becomes flattened. The relaxation of the zonule is secured by the contraction of the meridional fibres of the ciliary muscle.

It is difficult to do justice to such an article as Schoen's in an abstract, but some essential points may be put thus:

1. The cells of the ciliary region represent a forward prolongation of the retina.
2. The fibres of the suspensory ligament (Zonule) are but a part of the ciliary epithelium.
3. The external (anterior) capsule of the lens may be looked upon as a continuation of the zonule.
4. These various parts, retina, ciliary region, zonule of zinn and capsule constitute the envelopes of a ball which contains the vitreous body and the crystalline lens.

This ball, which may be compared to an India rubber ball filled with a liquid, is enclosed posteriorly by the sclerotic, laterally by the ciliary processes and muscle, while anteriorly it is free. If one compresses a rubber ball, leaving one portion without such pressure, that part will bulge or project. Similarly, if pressure be applied to a ball formed of the retina, the ball would become more convex at the unprotected part. Such

pressure is applied when the circular fibres of the ciliary muscle contract. When this pressure takes place, no alteration in the shape of the ball can take place in a backward direction, for the sclerotic prevents it, the bulging can only take place forward. Thus accommodation takes place.

[This theory is a very interesting one, but the verdict must be "Not proven."]

Operative Treatment of Squint.

St. John Roosa (*in Post-Graduate*) gives a clinic describing Pana's operation for Convergent Squint. True squint is always concomitant, being bilateral, not monolateral. Pana's operation recognizes this fact, the patient is put under ether, and both eyes are operated on. The first step is the conjunctival incision, by which the strabismus hook may be got under the internal rectus (if that be the one to be operated upon), and this is stretched so far as to bring the cornea in the external canthus. Then the muscle is divided, the conjunctival suture is put in, and the eye bandaged. Then the other eye is operated upon. The bandages are left on twenty-four hours, and, if an under-effect is observed, a drop of a 4-per-cent. atropin solution is put in to paralyze the accommodation.

Roosa recommends this operation for its good results. By the old method there were 20 per cent. of failures, *i.e.*, an excessive or an insufficient effect. By Pana's operation only about 5 per cent.

J. T. D.

Gold-Blindness or Retinal Asthenopia.

This is a defect of vision noticed in some members of the dental profession. They lose the power of distinguishing the gold filling from the tooth on which they are working. L. Webster Fox, of Philadelphia, read a paper on the subject before the Dental Society.

Gold-blindness is really an abnormally rapid exhaustion of the vision. This condition is especially apt to occur when the eyes have been fixed upon a small object for a longer or shorter time. It is exaggerated when such a warm color as yellow is under observation. Age does not predispose to it, nor youth exclude it.

This particular form of blindness is primarily produced by the excess of yellow rays from the gold metal.

We also have to remember that in dentistry it is necessary to fuse gold plate; this is done at a great expense of carbon, which, when burning at a high temperature, produces a white light, but in reality an excess of yellow rays exists. This excessive stimulation of the retina produces the same condition as is produced by looking at the sun.

Those troubled by this form of blindness notice that they cannot distinguish the gold from the tooth, nor see the contour of the cavity they are filling. They are obliged to take a few days rest, they then can see as well as ever and return to their business—but after an interval of work, the trouble recurs. Unless proper treatment is resorted to, the intervals become shorter and shorter in which he can work.

Treatment.—The first measure is to examine the refraction, the far-sighted individual with astigmatism being liable to the affection. Then, again, it is absolutely necessary to have true muscle balance. The general condition of the patient must be made a matter of investigation, with special reference to the possibility of a uric acid diathesis. The head should be carried erect—but, as much dental work has to be done with the head inclined, we must see that no tight neckwear is used.

A pair of slightly colored violet glasses is a boon to the gold-blindness.

Gonorrheal Ophthalmia.

At the Chicago Ophthalmological Society, A. E. Bulson read a paper on Gonorrheal Ophthalmia. In a severe case of this kind, with much swelling of the lids, he advises, as a first measure, to divide the outer canthus, and second, flush the eyes thoroughly with antiseptic solutions every fifteen minutes night and day.

A very interesting discussion followed the reading of the paper. F. C. Hotz opposed dividing the external canthus, but advised early and thorough applications of protargol.

W. F. Coleman advises strong solutions of nitrate of silver. C. D. Wiscott opposes dividing the canthus and also opposes such frequent flushings. His treatment is to keep the edges of the lids freely smeared with sterile vaseline, this allows the pus to escape freely. Then a thorough flushing with warm boric solution every hour throughout the day, and every two hours at night, is sufficient. He also uses strong solutions of protargol (20 per cent.) once or twice a day.

W. H. Wilder prefers permanganate of potash to every other antiseptic in those cases. He applies a solution, 1 to 500 or 1 to 1,000, with a brush or swab twice daily, and has the conjunctiva irrigated every hour with a 1 to 2,000 solution of the same.

E. F. Snyder strongly endorsed the use of permanganate of potash.

G. F. Fiske mentioned the use of ice. This is an important agent, and should be used so long as the cornea is not affected. But the minute the cornea is invaded the physician should use heat.

J. Elliott Colburn has discarded the use of nitrate of silver. As a cleansing agent, he uses a solution of peroxide of hydrogen, one to five of warm water. He then flushes with warm salt solution and fills the eye full of warm vaseline, using the hardest vaseline that would cool at the temperature of the body.

W. E. Gamble uses permanganate of potash—also nitrate of silver once daily.

A. E. Bulson, in replying and closing the discussion, strongly insisted upon the wisdom of slitting the external canthus. This he does, not so much to relieve pressure upon the cornea, as to facilitate cleansing—for in this way the upper lid may be lifted much more readily.

J. T. D.

PEDIATRICS.

IN CHARGE OF ALLEN BAINES, W. J. GREIG, AND W. B. THISTLE.

Acute Appendicitis Complicating Hernia in a Very Young Infant.

Elder, in *Montreal Med. Jour.*, describes a case which was diagnosed as scrotal hernia, strangulated, and sent in for operation, all attempts at reduction failing. These attempts were tried again under anesthesia, but, he says, fortunately failed. On operating and opening the tunica vaginalis free pus appeared, and further examination revealed a hernia of the cecum and appendix. The abscess was completely walled off from the peritoneal cavity, and after doing a typical appendectomy, curetting the cavity of the abscess with pure carbolic and neutralizing with alcohol, he enlarged the ring, and as the gut was fast recovering its healthy appearance he returned the hernia to the abdomen. The case made a perfect recovery, although only seven weeks old. The diagnosis of appendicitis was not made before the operation, needless to say. C. S. M.

Koplik's Spots.

Gehassky (*Maryland Med. Jour.*, Jan, 4, 1901,) confirms his views of a year ago as to the value of these spots in the diagnosis of measles. They may not be present, but if they are they are diagnostic. Sometimes they disappear early and the mouth may show on examination only minute purplish or dark red spots where the scales have been cast off. These spots also are diagnostic. The bluish white spots when present are on an inflammatory base, and are a scaling of the epithelium of the buccal mucous membrane analogous to the scaling which appears later on the skin. They are present in no other disease.

Resorcin in Pertussis.

According to Wiltse (*Albany Med. Jour.*), Roskam's method of applying a solution of resorcin of a strength of one-third of one per cent. to the glottis in cases of pertussis, is very efficacious. In infants under a year it is most useful, the improvement in these cases being more marked than in older children, though the attack was greatly modified in all cases. Begin to use as early as possible and apply every four hours. This is the same as Moncoroo's method, except that Moncoroo used a 10 per cent. solution of cocaine first and then the resorcin. Roskam found the cocaine to be dangerous and stopped its use.

C. S. M.

Bicarbonate of Soda Dressings.

M. W. Cadimiroo has used dressings of bicarbonate of soda in thirty cases of suppuration of diverse causes: burns, fistulæ, abscesses, boils, felons, contused wounds, suppurating glands. In burns this dressing rapidly arrests the discharge and hastens cicatrization, even in cases resisting all other treatment. Likewise they give excellent results in contused wounds, which rapidly heal without suppuration and leaving very slight scars. In abscesses and whitlows equally as good results follow.

The compresses should be applied as warm dressings, renewed daily, or better, moistened in place two or three times a day, or place between the compress and the oiled silk a compress of borated cotton covered with vaseline to prevent evaporation. In the last case the dressing may remain on two days.

The chief advantages claimed for this dressing are its absolute innocence, and antiputrid and analgesic action, rendering it invaluable in infant practice.

Editorials.

PERNICIOUS ANEMIA.

In the *Medical Press and Circular* for April 3rd there appears a lengthy and able article by Dr. William Hunter, of the London Fever Hospital, on the subject of pernicious anemia. Whatever Dr. Hunter has to say upon this topic is listened to with much interest, as it is known he has devoted many years of arduous study to this disease.

He holds strongly to the position that pernicious anemia is a sepsis, and must be added to the long list of diseases that must be regarded as of germ origin. The intermittent destruction of blood, and the increasing anemia, the lemon color, hemorrhages, dyspnea, palpitation, edema, from the absorption and hemolytic action of poison in the blood; the periodic disturbances of the alimentary tract, chiefly the stomach and the intestine, and toxic attacks, as sweatings, nervous symptoms, numbness, tingling, ataxia, neuritis and sclerosis of the cord, all bear witness to its germ origin and septic nature. In this infection, oral and gastric sepsis plays an important part.

In the blood there is a degree of oligocythemia, far in excess of that caused by malignant, or wasting diseases, however long standing, and produced without the intervention of hemorrhages. While there is a great destruction of the blood corpuscles, there is a relatively high ratio of hemoglobin to each corpuscle. This high ratio is never met with in anemia from loss of blood. Hemolysis is greatly increased. The greatest degree of oligocythemia can be produced by means of hemolytic agents; but experience with disease shows that this is not easy by repeated hemorrhages, nor by wasting nutritional diseases of long standing, however profound.

The urine is high colored, due to the urobilin, which it contains. This character is marked by periodicity, and in this way is distinguished from the urobilinuria of fibrile diseases. The color is related to the degree of hemolysis, and this in turn is dependent upon the gastro-intestinal sepsis. The amount of urobilin follows closely the progress of the disease. When the

patient is well, the urine is almost colorless ; when the attack becomes worse, the urobilin increases.

With regard to the gastro-intestinal tract, it must be said that this is the site of the infection ; but that these symptoms do not indicate its origin, course or nature. The gastro-intestinal symptoms include indigestion, anorexia, nausea, sickness, pyrosis, salivation, acidity, retching, vomiting, gastric pain, diarrhea, etc. These symptoms are present to some extent in all cases of progressive anemia, though they may be occasionally absent for a time.

Fever is a notable feature of the disease. It is quite irregular in type, and varying in degree. It may be absent for a time. But the experience will be that there is a slight rise at night to 99 or 100 F. This irregularity is a characteristic of septic fever. The nervous symptoms are very significant of sepsis. There is weakness, exhaustion, tingling, slight loss of power or paralysis.

The cause must be sought in oro-gastric sepsis. Bad teeth and decay at their roots take a leading part in the causation. The treatment consists in mouth antiseptics, gastric and intestinal antiseptics, the use of arsenic and the employment of the antitoxic serum. The loss of the antistreptococcic serum should be at first small, about 5 c.c. There is a reaction after its administration. Under its employment there is a rapid increase in the number of red corpuscles, and a distinct abatement of the symptoms. In one case the red corpuscles were 1,500,000 when the first injection was given. The patient had four injections. The red corpuscles began to increase in numbers. When the last count was made there were 4,550,000. Digestion was good, and the urine pale. The only symptoms remaining was a slight numbness in the tips of his fingers.

PANCREATIS.

The above is the title chosen by Mr. A. W. Mayo Robson, of Leeds, for his address before the American Surgical Association. He points out that on making an abdominal section for gall stones, the head of the pancreas has been found enlarged

and a bad prognosis given. In course of time the patients recover; and some other explanation sought than malignant growth.

When the bile ducts are obstructed, the symptom of jaundice obtrudes itself on our notice.⁴ There are no such positive symptom in pancreatitis. It is true that when the pancreatic secretion is not passed into the intestinal canal, the motions become light colored, as in the arrest of the flow of bile. If glycosuria, lipuria, and fat in the stools occur they are of great diagnostic value, when the pancreatic ducts are occluded there is extremely rapid loss of weight. The pancreas is very soft and easily bruised. Comparatively slight blows on the epigastrium have caused inflammation of the organ. The pancreatic duct enters the second portion of the duodenum along with the common bile duct. An obstruction to the latter will obstruct the former. There may be a suppurative catarrh of the pancreatic duct analogous to suppurative cholangitis. Glycosuria, lipuria and fat in the feces are rare and require very considerable destruction in the gland before they occur.

The essential and immediate cause of pancreatitis is bacterial infection. In these cases there is usually the history of lithiasis, injury, gastro-duodenal catarrh, ulcer, typhoid fever or influenza, or some such condition. The most usual channel is through the duct, though the infection may arise from the blood in pyemia, or by direct extension from the adjoining tissues. The association of pancreatitis is very frequent with gall stones. When stones are found in the common duct the head of the pancreas is found enlarged and diseased. Thus cholelithiasis give rise to disease of the gall bladder and also pancreatitis.

Fat necrosis is commonly found in connection with pancreatitis. The fat splits into fatty acids and glycerine. The latter is absorbed, but the former unite with the calcium salts in the cells, forming yellowish white patches in the subperitoneal fat. There may be hemorrhages into the pancreas as the result of the cholemia. This tendency to hemorrhage is very marked in the subject of pancreatitis along with gall stones.

The treatment of an acute attack is much the same as for peritonitis in the upper abdominal region. The pain is very acute, and must be relieved. The collapse may demand stimulants. The symptoms at first are very indefinite, and would

justify surgical interference as soon as the collapse has passed off. As in perforative or gangrenous appendicitis an early evacuation of the septic matter is necessary, so in this affection an early exploration from the front is demanded. The subacute and chronic cases of pancreatitis call for surgical intervention to evacuate the pus and relieve the distention.

ACUTE INSANITY.

Tempora mutantur et nos matamur in illis.

In nothing is the truth of the above saying better borne out than in the study of medical opinion regarding acute insanity. The time was when the maniac was regarded as under the spell of some evil spirit; the disease was looked upon as of supernatural origin.

Slowly the truth began to dawn upon the medical horizon that acute insanity was a disease of the mind. But what was the mind? For answer to this question one might just as well go ask the winds as look up the pages of works treating of mental diseases and insanity.

But there came a further advance, when it was held that acute insanity, like all forms of insanity, was due to disease of the brain. The brain had now come to be regarded as the organ of the mind. Disease of the brain therefore caused derangement in the thought, language and conduct of the person. What the disease of the brain was that underlay these outbursts of acute insanity had not been defined, nor could it in the condition of medical science at the period when Esquirol, Pinel and Pritchard did their great work.

Gradually light came over this portion of medical research, as has been the case in so many other fields of scientific investigation. The important studies of Bouchard on auto-intoxication from the alimentary tract; the work of Horsley on the thyroid gland; of Ord, on myxedema; of Klippel, on the relationship of hepatic disorders and mental disorders—all go to show that toxins in the system must be regarded as the cause of acute insanity. Every clinician is familiar with the deliria of the acute infections.

Of the toxic agents that cause insanity the following may be

mentioned : 1. Those taken into the system, as alcohol, cocaine, morphia. 2. Those generated within the system, as the poisons of syphilis, rheumatism, influenza, and other infections. 3. Those formed as the results of disordered metabolism, as in Bright's disease, diabetes, myxedema. 4. Those that arise in connection with the digestive canal, in consequence of functional derangements of these organs. The fact that under proper treatment so many cases of acute insanity recover, is very strong proof that these attacks are due to a temporary cause, and that there is no organic disease of the brain.

In cases of acute delirious mania cultures of staphylococcus pyogenes albus, and aureus, and micrococcus tetragenus have been found. Other organisms have been also found. It has been made a matter of close study that in acute insanity the gastric juice, urine, and sweat possess specially toxic qualities. In many cases great benefit has arisen from the washing out of the stomach and other eliminative plans of treatment.

CANADIAN MEDICAL ASSOCIATION.

We are pleased to be able to say that arrangements for the Winnipeg meeting (August 28th to 31st next) are progressing favorably. From what we can learn the gathering promises to be large and representative. Dr. O. M. Jones, F.R.C.S. (Eng.), Vancouver, will deliver the address in surgery, and Dr. J. R. Jones, Winnipeg, the address in Medicine. Several interesting discussions are arranged for, and the social side is being looked after as only a western city can do it.

There is to be an outing to Fort Garry, and on Saturday, the 31st August, an excursion to Brandon given by the profession of the Prairie City.

The railways have promised a single fare return rate on the certificate plan, good going August 20th to 28th, and good to return, leaving not later than September 15th. If the all-rail going trip is taken, and one desires to return by the lake route a ticket will be issued on payment of \$4.25, just enough to include meals and berth. If one desires to return by rail the ticket is issued *free*. This makes it possible for every one to attend, and a large number should, for we all have friends who

are expecting us to visit Manitoba, the North-West, or British Columbia, to all parts of which return tickets will be issued *after* the meeting for single fare from Winnipeg upon presentation of the certificate of attendance.

The General Secretary, Dr. F. N. G. Starr, Biological Building, Toronto, will be glad to furnish any information to persons intending to take advantage of this unusually cheap trip to the West.

ONTARIO MEDICAL ASSOCIATION.

The preparations for the annual meeting on June 19th and 20th are almost completed. The Committee on Papers, under the guidance of Dr. H. I. Machell, have arranged for a number of discussions on important subjects. Gastric Ulcer, which has of late become of so much surgical importance, will be discussed very fully. It will be introduced by two papers. One medical, by Dr. J. D. Edgar, of Hamilton; the other surgical, by Dr. Henry Howith, of Guelph.

Empyema, another condition of interest and importance, will be treated in like manner. Dr. Ferguson, of London, will introduce the medical aspect of the case, and Dr. Turnbull, of Goderich, the surgical. It is to be hoped that a very general and full discussion of these subject will be indulged in by those interested. Dr. R. W. Garrett, of Kingston, will introduce the subject of Extra Uterine Pregnancy. Dr. Charles P. Noble, of Philadelphia, will be the guest of the Association. His paper will treat of "The Complications and Degenerations of Fibroid Tumors of the Uterus," with reference to the treatment of these growths. Dr. Prevost, of Ottawa, will present the subject of "Intraspinal Cocainization." Dr. Elliott, of Gravenhurst, will discuss the "Treatment of Tuberculosis in Sanitaria."

The Secretary has received a fair number of papers for presentation, but there is still place for a few more. Would members intending to take part in the meeting kindly send in the titles of their papers as early as possible that they may appear on the provisional programme, which will be ready early in June.

Arrangements will be made with the railways as formerly, and the members are urged to make use of this reduction,

obtaining certificates when procuring their tickets that they may avail themselves of the reduced return rates. The greater number of certificates thus procured the greater will be the benefit derived. It is earnestly hoped that this meeting of the Provincial Medical Association will be encouraged and well supported and attended by the profession from all parts of Ontario.

DEATH OF AN EMINENT FOREIGN PROFESSOR.—Joseph Fodor, M.D., Professor of Hygiene at the University of Budapest, has recently died. He was born in 1843, studied under Pettenkofer at Munich, and later under Baron Liebig. Dr. Fodor was, after his master Pettenkofer, the best known of the European sanitarians, and did much toward rendering Budapest the healthy and beautiful city it now is. He was a man of many gifts, and was for some time joint editor of the medical journal *Orvosi Hetilap*.—*Medical Record*.

Personals.

Dr. J. T. Duncan has removed to 45 Bloor St. East.

Dr. Gowans, of Horning Mills, paid a visit to his friends in Toronto last month.

Dr. J. M. Cotton is rapidly recovering and recuperating at the "Welland," St. Catharines.

Dr. R. M. Calder, of Petrolea, has been appointed associate coroner for the County of Lambton.

W. T. McArthur, M.B. (Tor. '95), of Los Angeles, Cal., recently passed the examination for the degree of F.R.C.S. Edinburgh.

Dr. J. A. Temple is, we are pleased to say, able to be out again after the serious runaway accident which confined him to his room for some weeks.

Dr. R. Dwyer, who has been engaged in post-graduate work in London for the past year, is expected to return and resume his duties at St. Michael's Hospital early in June.

Drs. Adam Wright and W. P. Caven, after spending some time in London, left for the continent May 14th, for a trip to Paris down the Rhine and through Switzerland. It is anticipated that they will be home about the 1st of July.

Dr. Price-Brown returned last week from a short visit to New York and New Haven. While in the latter city he was elected Fellow of the American Laryngological Association, which held its annual meeting this year at Yale University.

Book Reviews.

Transactions of the American Dermatological Association at its Twenty-fourth Annual Meeting, May, 1900. Official report of the proceedings by FRANK HUGH MONTGOMERY, M.D. Chicago: P. F. Pettibone & Co.

The volume before us consists of 232 pp. octavo. The articles are of decided merit, and deal with such important subjects as the forms of dermatitis, syphilis, parasites, malignant diseases. There are a number of illustrations. Those who are interested in skin diseases will find much pleasure in the perusal of this volume. Such contributors as Stilwagon, Bowen, Wende, Jackson, White, Elliott, Corlett, Bronson, Morrow, Hyde, etc., are a guarantee of the standard of the papers.

A Treatise on Orthopedic Surgery. By ROYAL WHITMAN, M.D., of the Orthopedic Department of the Vanderbilt Clinic, the New York Polyclinic, the Hospital for the Crippled, and the Hospital of St. John's Guild. 457 illustrations, pp. 650 octavo. Lear Brothers & Co., Philadelphia and New York, 1901.

There are now many good works on the subject of orthopedics. One naturally asks, why a new work? The present volume answers this question by its own merits. It is up-to-date in pathology, symptomatology and treatment, both medical and surgical. The illustrations are of special value, as they are in most cases original and from photographs. Although this is one of the latest works on the subject, it is also one of the best. The well-known publishers have spent no pains in making the book attractive in every detail. The book is a storehouse of valuable information on orthopedics.

Transactions of the American Pediatric Society. Reprinted from Archives of Pediatrics.

In a work such as this we see how leaders of the profession do their work, how they differ in opinion, and honestly try to set others right or be set right themselves. If they do not understand they ask questions. If society transactions were always published, papers, discussions and all, there would be better quality of work done all round. Men of ideas who could not or would not write them up for publishing would have a chance of expressing them and giving others the benefit. Asking questions also is a benefit to many besides the one questioning, and the discussions in this work are as important in their way as the papers. If a society is worth having and attending, its transactions are worth publishing. In this

country at least there seems to be a great waste of labor in getting up papers for the benefit of a few only. Those who write books have by no means a monopoly of the knowledge of medicine, and if society transactions were all published the mass of good things given to physicians would astonish us.

Nursing Ethics. By ISABEL HAMPTON ROBB. J. B. Savage, 90-92 Wood Street, Cleveland.

The author of this little work evidently nurses for the love of it. If her ideas can be put into practical use the standard of the nursing profession will be raised to a degree not to be estimated. Every nurse should read and ponder over this book, as, more especially, should all having the training of nurses in charge. The ideal the author sets is high, and we fear that in our day at least it will not be attained. Nurses, like the members of a profession closely allied to them, are but human, and are likely to remain so until the close of the "time, and times and a half." Of professional etiquette we see a good deal in both of ethics little or more. However, the book cannot but do good, and should have a wide circulation.

Saunders' Medical Hand Atlases.—External Diseases of the Eye. By PROF. O. HAAB. Edited by G. E. De Schweinetz, Professor of Ophthalmology in Jefferson Medical College, etc. 76 colored plates and 6 engravings. Philadelphia: Published by W. B. Saunders.

The number of full page colored plates in this work (76) fully justifies its title—an "Atlas" of the External Disease of the Eye. The plates are numerous enough to illustrate almost every form of disease in this connection. And they are exceptionally well done. These plates are of value to the ophthalmologist, but they will be of special service to the busy physician, who has to see eye cases only occasionally. Many a doubtful diagnosis will be cleared up by a reference to them. They are all good, but among the best are—those showing abnormal conditions of the lachrymal sac, eczema of the lids, hordeolum (stye), dermoid tumor, gonorrheal conjunctivitis, diphtheritic conjunctivitis, pterygium, hypopyon (pus in the anterior chamber), syphilitic iritis, senile cataract, and zonular cataract.

But this book is more than an atlas, for it gives the pathology, diagnosis, prognosis and treatment with quite sufficient fullness, of the diseases on which it treats. The editor has done his work with great care and admirable judgment. Where the lines of treatment followed upon this continent differ from the German, the editor has given the alternative methods. The reader thus has the advantage of comparing the methods of treatment.

The scope of the work can be judged by the heading of the chapters: I. The Examination of the Eye in Disease; II. Diseases of the Lachrymal Apparatus; III. Diseases of the Eyelids; IV. Diseases of the Conjunctiva; V. Diseases of the Cornea; VI. Diseases of the Sclera; VII. Diseases of the Iris and Ciliary Body; VIII. Diseases of the Lens; IX. Diseases of the Vitreous Body; X. Glaucoma; XI. Diseases of the Orbit. Whether judged by the plates or by the text, the book is an admirable one, and forms a thoroughly reliable guide to the most advanced treatment of the diseases spoken of.

J. T. D.

The Stethoscope and Phthisis.

The characteristic of the newly-qualified practitioner is an implicit reliance on instruments for facilitating physical examination. He hardly looks at the patient, but proceeds with an enthusiasm tempered by anxiety to explore the various organs which are accessible to the stethoscope or other mechanical appliance. As he acquires experience he learns that there are other means of arriving at a conclusion, as indeed there must be, seeing that our predecessors were by no means contemptible diagnosticians at a time when the sphygmograph, the stethoscope, and the ophthalmoscope were unknown. It is, perhaps, especially in phthisis that too blind a devotion to the sounds revealed by the stethoscope is apt to mislead. The absence of audible evidence of internal lesions is a remarkable fact in many cases of even advanced phthisis, and physical signs may come and go in a way that baffles explanation and discourages the investigator. In such cases a wider survey of the patient will usually reveal indications amply sufficient to enable the physician to arrive at a diagnosis even in the absence of stethoscopic signs. The latter when present are important, though not infallible, but it is important that the practitioner should not put on blinkers and shut out from view the information to be gathered from an attentive inspection of the patient viewed as an independent and composite organism. The microscope is another instrument which often fails to give positive support to a diagnosis which the clinical signs fully justify. In the words of the writer in a recent article in the *Polyclinic*, "We must not on account of these facts underrate the value of the instrumental aids to diagnosis which modern science has put into our hands, let us however carefully keep them in their place and not permit them to usurp an authority to which they are not entitled, above all let us not allow exaggerated trust in them to displace the most sedulous cultivation of other and older methods.—*Medical Press Circular*."

Selections.

SURGICAL HINTS.

Little children should never be operated on during very hot weather if the surgeon can choose his own time. They are very apt at this time, however carefully they are fed, to develop a severe form of intractable diarrhea.

Atheroma of arteries does not contra-indicate amputations so much on account of the danger of hemorrhage as because, in these cases, the flaps slough easily owing to lowered vitality. Hence it is necessary to select the operation that will give the best blood supply.

Cancer occurring in a breast, after the other breast has been removed for this disease, ought to be operated on if there is no sign of recurrence on the operated side, because the new growth must be considered as a primary lesion rather than as a result of metastasis.

It is better to discard carbolic acid entirely in the treatment of wounds of children. Not only do they develop gangrene very rapidly from its continuous effect in wet dressings, but fatal cases of poisoning have been known to occur from the application of so weak a solution as 1-40.

In small abscesses, occurring in infected wounds, whether they involve the whole or only a portion of the wound, there is no better treatment than the removal of stitches, washing out with peroxide of hydrogen, and thoroughly painting the pyogenic surfaces with tincture of iodine.—*International Journal of Surgery.*

Chrysarobin in Hemorrhoids.

Pounne (*Journal des praticiens*) has successfully used chrysarobin, in suppository or ointment, in bleeding hemorrhoids, in the following combinations:

R	Chrysarobin	.....	$1\frac{1}{8}$ grain
	Iodoform	.....	$\frac{3}{10}$ ths of a grain
	Extract of belladonna	.....	$\frac{1}{85}$ th of a grain
	Cacao butter	.....	30 grains

M.—For one suppository. Two or three to be used daily.

R	Chrysarobin	.....	$22\frac{1}{2}$ grains
	Iodoform	.....	$7\frac{1}{2}$ "
	Extract of belladonna	.....	15 "
	Vaseline	.....	300 "

M.—Fiat unguentum.—*N. Y. Med. Jour.*

For Lepra, Psoriasis, and Lupus.

Progrès médical for April 27th ascribes the following to Bocquillon-Limousin :

R. Gynocardic acid	12 grains
Chaulmoogra oil	150 "
Vaseline	300 "
Paraffin	75 "

M.—For local application.—*N. Y. Med. Jour.*

The Treatment of Leucorrhœa.

According to *Ἱατρικὴ Πρόοδος* for March, Snegnirev recommends a vaginal injection of lactic acid, three per cent.

The same journal gives the following formula :

R. Potassium chlorate, }	} of each..... 30 parts
Tincture of opium, }	
Tar	470 "

M.—From two to three soup-spoonfuls in a quart of water as a vaginal injection night and morning.—*N. Y. Med. Jour.*

Treatment of Eczema in Children.—By DR. LEISTIKOW (*Monatsh. f. prakt. Dermat.*)

The author says that in the treatment of eczema squamosum, as well as in mild forms of papular and vesicular eczema, the following combination is sufficient :

R. Adipis lanæ,	
Zinc oxid,	
Amyli, aa.....	5.0
Vasel flav.....	10.0
Hydr. oxid. flav.....	0.25-0.50

In eczema rubrum or crustosum, zinc oxid and ichthyol mull ointment is indicated at once. There are moist eczemas, however, which constantly recur and resist the former methods of treatment. In such cases and in old cases of papular, and especially in pruriginous and herpetoid eczemas of childhood mild pyrogallic ointments give the best results. They should always be used and are excellent for the relief of itching. The more acute and moister the eczema the milder the pyrogallic ointment ($\frac{1}{2}$ -1 per cent.); it may be given in 2 or 3 per cent. strength. During the treatment urinary examination must be made, though ill-effects have not been observed.—*The Post-Graduate.*

Mental Therapeutics.

Suggestion has pretty well supplanted hypnotism in the practice of physicians. John B. Huber, in the *Trained Nurse and Hospital Review*, says :

The art of suggesting healthful ideas is one of the most important weapons in the armamentarium of those who treat the sick. This is another way of saying that the doctor and the nurse have inspired faith in the patient. When the doctor states his conviction that such and such a symptom will disappear and that he will find the patient better to-morrow, he suggests the idea of improvement, which belief in his statement impresses upon the patient's mind. When next he declares his expectation that the patient will be able to sit up on the following day, the suggestion stimulates the latter's latent energies to the extent of realizing the expectation. When, then, he declares he will be much disappointed if he does not find the patient awaiting him in the sitting-room on the occasion of his next call, the latter is aroused by the same processes to the point of obeying the suggestion.—*Charlotte Med. Jour.*

Treatment of Acute Gastralgia.—By DR. T. SIDNEY SHORT (*Birmingham Med. Rev.*)

Gastralgia is essentially a condition in which it is the patient who should be treated and not the disease. The functional activity of the stomach is not at fault, so that changes in diet as such, or helps to digestion in the way of pepsin, etc., are not of much use. A complete change, with alteration of occupation and freedom from worry, will often stop the attacks. If this is impossible—and in the very people who suffer from gastralgia it usually is—the best thing to do is to rest the stomach absolutely. This should be done by keeping him lying down and feeding either by rectum, or, if per os, by giving them as little as possible. Two or three days' smart purging at the commencement has seemed to the author to be especially valuable. For the attacks themselves, morphine and cocaine may be given in a draught. Sharp counter-irritation over the stomach by blistering is often very useful, just as it is in other forms of neuralgia. In one of the author's cases the application of the faradic current to the pit of the stomach completely removed the pain in a few minutes, but it did not stop the recurrence of the attacks. The relief afforded by the interrupted current, increased in strength until actual pain is produced, in cases of sciatica is beyond question, and the author thinks similar relief may be anticipated in cases of neuralgia of the stomach so long as no inflammatory condition is present.—*The Post-Graduate.*

A Literary Moral.

The New York *Tribune* of Sunday, March 31st, quotes these remarks from the London *Academy*: "An Edinburgh correspondent sends us the following: 'Addressing his students last week on the intoxicants, Dr. Wylie, the professor of medicine in Edinburgh University, adduced an experience of his that is not without its literary moral. He was called one day to see a young man. As he was entering the house the patient's sister exclaimed: "Oh, it's all that horrid book!" Inquiry elicited the fact that the patient's favorite reading was "Sherlock Holmes." The young man was in a very low state, and his tell-tale arm was dotted with hypodermic punctures. His admiration for the most popular paper detective had betrayed him into the cocaine habit. Taking this case as a text, Dr. Wylie permitted himself a sentence or two of severe stricture on Conan Doyle's knowledge of the action of drugs: "If such a man as Sherlock Holmes had existed, dosing himself as depicted by his creator, in a few weeks his opinion on anything would not have been worth having." Cocaine, according to Dr. Wylie, is even more disastrous than morphine. "It renders its subject vain-glorious and pleased with himself, but blunts the intellect and blasts the imagination."'"—*Medical Record*.

Treatment of Cough.

Weiss (*Die Heilkunde*) states that the velocity with which the air is expelled during violent coughing is double that of the wind during the worst hurricane. It is, therefore, evident that great force is expended, and a violent laryngeal cough may completely exhaust the patient. Treatment should be directed to the cause of the cough when this is known. Too often, however, symptomatic treatment is alone possible. If crepitations are present in the lungs and are due to secretion, the indication is to render expectoration as easy as possible. Apomorphine is probably the most valuable expectorant. Difficult expectoration frequently depends on the viscosity of the secretion. To prevent the secretion becoming too dry and viscid, the air should be kept moist by the bronchitis kettle, Siegle's spray, or other means; the rate at which secretion dries depends entirely on the degree of moisture of the atmosphere. To combine expectorants with narcotics, as is so often done, is irrational. If a narcotic is required as well as expectorants it should be given independently, and only when there is some special indication, such as the necessity for a good night's rest. Even when a narcotic is given it is, as a rule, inadvisable to suppress coughing entirely. Heroin, the diacetic-acid ester of morphine, is the most satisfactory drug. It does

not weaken the power of expiration, but lessens the violence of the cough. It not only diminishes the irritability of the peripheral nerves, but has a specific action on respiration. The respirations become fuller and deeper, while the frequency is diminished. The soluble hydrochloride of heroin is the best salt. For the cough of cardiac patients it may be given in pills with powdered digitalis. Codeine is less satisfactory. If the cough is painful dionine acts excellently. This also is a derivative of morphine, but has retained the analgesic action rather than the specific action on cough and respiration peculiar to heroin. For all forms of spasmodic cough, and especially for whooping-cough, belladonna is probably the most useful drug. It stimulates the respiratory centre, paralyzes unstriated muscle, and anæsthetises the peripheral nerve-endings.—*British Medical Journal*.

Local Anesthesia.

Many surgeons make use of local anesthesia extensively, indeed, it no doubt would be more proper to say that quite all advanced operators use local anesthesia more or less, and that there is a constantly increasing number who are giving the method a wider and wider application. There is a limit, however, to the usefulness of local anesthesia; in other words, there is a border-line upon one side of which local anæsthetic means can be satisfactorily applied, but beyond which general anesthesia must be depended upon.

Local anesthesia may be selected for almost all minor operations in or on parts of the body that can be readily reached, and where local anæsthetic means can be thoroughly applied. The dangers of the subcutaneous injection of a 1 per cent. solution of cocaine seems to be very slight—certainly slight when compared with the dangers of general anesthesia—although a degree of care should always be exercised. The solution and syringe should, of course, be aseptic; the injections should be made into the loose subcutaneous tissue slowly; and, where necessary, the integument over the area to be anesthetized may be rendered insensible to the needle punctures by using ethyl chloride.

Small tumors can then be painlessly removed, fingers and toes amputated, aspirations done, and minor plastic operations performed.—*The Clinical Review*.

Formaldehyde.

The usual strength (ten to fifteen drops of a 40 per cent. solution to a pint of water) employed in a surgical wash should not be used about the eyes. The conjunctiva is too sensitive for a solution of such potency.—*The Clinical Review*.

The Canadian Practitioner and Review.

VOL. XXVI.

TORONTO, JULY, 1901.

No. 7.

Original Communications.

THE ROENTGEN RAYS IN THE DIAGNOSIS OF URINARY AND BILIARY CALCULI.

BY S. CUMMINGS, M.D., HAMILTON.

The Roentgen Rays may be said to have opened up a new era in the diagnosis of calculous diseases, for by their intelligent use a positive opinion may be expressed as to the presence or absence of all calculi, with the exception of biliary. Judging from my own experience, I believe that any error is due to faulty technique and inability to correctly interpret the skiagrams, and not to the method itself.

The classical symptoms of renal and ureteral calculi are often absent, and in many cases which only complain of vague urinary symptoms calculi are to be found. Ureteral calculi have no diagnostic symptoms, yet they are far from uncommon. Leonard has found them in 50 per cent. of his cases, and in my limited experience the percentage is even higher.

I believe that X-rays are of as much value in urinary calculi as the ophthalmoscope is in the diseases of the eye, or as the laryngoscope in diseases of the larynx. One case has come under my observation in which the appendix had been removed for supposed appendicitis. The symptoms still persisting, the case was examined with the X-rays, and a large calculous was discovered in the right kidney. This was removed, with the result that the patient was completely cured. On account of the comparatively small number of my cases, I prefer to give a short history of each.

My first case was skiagraphed in 1898.

1. Mr. B., age 50, complained of great pain in the right lumbar region. There was no renal colic, but he passed large quantities of blood by the urethra, so much so that the urine

looked like porter. A cystoscopic examination of the bladder showed nothing abnormal, but from the right ureter blood could be seen oozing at intervals, like smoke from the crater of a miniature volcano. The skiagraph showed a large calculus in the right kidney. The patient refused operation, recovered from the attack, but has had several similar ones since.

2. Mr. H., age 35, patient of Dr. Anderson, in the spring of 1897 had an attack of left renal colic; in 1898 had recurring attacks of pain on the right side, confined to the region of the kidneys and not radiating to any extent. The urine was acid, and contained only a few white cells, which disappeared from time to time. The patient continued in this condition, having recurring attacks and becoming almost a complete invalid, until 1899, when, the diagnosis of renal calculi having been made, I examined him with the X-rays, and found a large calculus in the pelvis of the right kidney. This Dr. Anderson removed by nephrolithotomy. During convalescence the patient had an attack of left renal colic, two small calculi were passed; these had been overlooked in the interpretation of the plate, and a re-examination of the negative showed that there were three distinct shadows of small calculi in the left kidney.

3. Mr. K., age 35, a moulder, patient of Dr. J. E. White, for a number of years has had pain in the right shoulder and side; no urinary symptoms; for the last four years attacks of renal colic, which recurred so frequently that he was forced to abandon his trade. During the last two years has had frequency of micturition, urine reveals no abnormality, except crystals of oxalate of lime. Renal calculus was diagnosed, confirmed by the skiagraph, which showed a large calculus in the pelvis of the right kidney. Dr. White removed an oxalate of lime calculus by nephrolithotomy, with the result that the patient was entirely relieved of his symptoms.

4. Mr. A., age 36, patient of Dr. Balfe, had typical renal colic on the left side for several hours, blood was found in the urine, sudden cessation of pain; skiagraph two days after, no calculus could be found, showing presumably that it had escaped from the ureter and been voided with the urine.

5. Mr. C., age 33, for the last five years has had pain in the back, but mostly in the region of the stomach, to such an extent that he was treated by specialists in Chicago for gastric disorder. He never had any symptoms of renal colic, urine only contains crystals of oxalate of lime. His condition became so bad that he resigned his position and spent two years in the south. He consulted Dr. Thompson, of this city, who advanced the possibility of the presence of renal calculus, and referred the case to me. The skiagraph showed a large calculus in the right kidney, which I removed by operation.

6. Mr. H., age 48, had the classical symptoms of left renal and ureteral colic, sudden intense pain shooting to the groin, retraction of the testicle, blanched facies and considerable shock, tenesmus and frequent urination, but no blood in the urine. After eight hours he experienced sudden and complete relief, no doubt due to the escape of the calculus from the ureter. Three days subsequently a skiagraph was taken, but after the most careful search no calculus could be found in the kidneys, ureters or bladder, demonstrating conclusively that it must have been voided from the bladder.

7. Mr. R., age 44, has had several attacks of renal colic on both sides; urine normal. Skiagraph shows three small calculi in the right kidney and one in the right ureter at the brim of the pelvis, and one small calculus in the left kidney. Operation not advised.

8. Mr. T., age 63, has had several severe attacks of renal colic affecting the left side, urine normal; for the last two years no attack. Skiagraph fails to demonstrate the presence of any calculi, showing evidently that they have all been passed.

URETERAL CALCULI.

Nearly all these have been found accompanying renal or vesicle calculi.

Miss C., age 34, a patient of Dr. Olmstead, urine acid, some pus and frequency of micturition, family history strongly tubercular. Dr. Olmstead cystoscoped the bladder and found it normal, catheterization of the ureters showed that the right one was normal and that some pus came from the left. With a Kelley's bougie tipped with wax he obtained a scratch from the left ureter. The case was referred to me for X-ray examination; skiagraph showed a small calculus the size of a pea in the left kidney. The second skiagraph, taken some days later, showed the interesting condition that the calculus had descended the ureter and was lodged about one and a half inches outside the bladder walls. The wax-tipped bougie confirmed it in this location. The ureter was dilated with bougies, and the calculus subsequently was passed, demonstrating the value of this method of treatment of ureteral calculi in the female.

Mr. —, age 69, complained of chills at times, frequent micturition and purulent urine swarming with bacteria, but never had any pain. The skiagraph taken in October, 1900, showed three minute calculi in the right ureter, about one and a half inches from the bladder, and one small calculus in the left kidney. The patient was placed on urotropin and large quantities of distilled water, with the result that the urine improved, but the skiagraphs, taken at intervals of three and six months,

show the calculi to be still in the same position. In June, 1901, this patient, after spending the day at Niagara, was seized with a slight pain in the region of the left kidney and profuse hematuria to such an extent that it was necessary to catheterize the distended bladder several times, and wash out the clots of blood. A complete blood cast of the ureter, about ten inches in length, was obtained in one of the washings. A skiagraph was taken and compared with that of April, 1901, and it was now noticed that the calculus in the left kidney had descended the ureter to within one inch of the bladder. While cystoscope was not employed to actually see if the blood came from the left ureter, it seems to me, when taking into consideration the slight lumbar pain on the left side, and the descent of the calculus, that the explanation of the hematuria is obvious.

The following is a case which shows the existence of calculi for over 40 years.

Mrs. G., age 70, passed, in 1860, a small mulberry calculus after an attack of renal colic; since then there has never been any colic or pain, but since 1880 the urine has contained pus. The patient has had for years spells of vomiting and nausea, which were diagnosed as nervous dyspepsia by the successive family physicians and consultants. When I assumed charge of the case I was forced to be content with the same diagnosis. The urine was acid and contained considerable pus. I noticed that during the attacks, which had now become more frequent, the urine was somewhat suppressed. I advised the use of the cystoscope to make an intelligent exploration of the urinary tract, but this was refused. One year ago the first skiagraph was taken, and a veritable mine of calculi was shown on the plate—there were four in the right kidney, two in the left, eleven in the right ureter, seven in the left ureter, and two small calculi in the bladder. On account of the advanced age no operation was advised; pyonephrosis developed, and the case ended with uremia and terminal infection.

Miss R., age 29, was considered to have a movable kidney on the right side which suddenly disappeared; never any renal colic, urine normal. Skiagraph shows a small ureteral calculus two inches distant from the bladder. Ureter was dilated with Kelley's catheters, but the subsequent skiagraph still shows the calculus in the same position.

The advantages of the Roentgen rays in ureteral calculi may be summed up by stating that they render the diagnosis of the calculi certain. Heretofore the only means at our disposal have been palpation, provided the calculus was of sufficient size, or the somewhat uncertain use of the wax-tipped bougie in the female. The ureteral are the easiest of all calculi to detect, and an operation for their removal can be directed with mathemati-

cal accuracy by reference to the skiagraph. In cases of hydor or pyonephrosis due to ureteral calculi, the obstruction can be removed and the kidney left intact.

VESICLE CALCULI.

Stone in the bladder can usually be discovered by the ordinary means, such as the sound and the cystoscope, but I believe that one possessed of the necessary knowledge of the X-ray technique can diagnose calculi in the bladder more simply and more accurately. A positive or negative diagnosis can be rendered at once. There is no danger of infecting the bladder with instruments. The size, position and number of the calculi can be estimated. We know that even the most skilful surgeons have failed to detect stone with the sound. If there is enlargement of the prostate, or a urethral stricture that prohibits or renders difficult the use of the sound, the X-rays are invaluable. All encysted calculi can be recognized. This method has the further advantage of causing the patient absolutely no pain or disturbance.

Mr. T. had classical symptoms of vesicle calculus. The skiagraph which I pass around shows the presence of a large calculus which was crushed and removed.

Mr. R., age 55, had ordinary symptoms of stone, urine alkaline 1015, offensive, and containing triple phosphates, pus and bacteria. He was sounded twice with negative results, and I also introduced a searcher, but could not detect the stone. Skiagraph showed a calculus the size of a bantam egg which was removed by litholopaxy.

Mr. D., blacksmith, age 56, has had several attacks of renal colic on both sides. One year ago symptoms of vesicle calculus appeared, urine acid 1010, some pus. During my absence in Europe last year he was sounded for stone with negative results. The skiagraph showed three small calculi in the left, and one in the right kidney, and several multiple calculi in the bladder. That these stones were not encysted in the bladder was proven by the simple expedient of turning the patient on his abdomen, and taking another skiagraph, when the stones could be seen in an altered position, lying on the anterior wall of the bladder.

Mr. McK., age 56, about one year ago he consulted me for symptoms of stone in the bladder, the urine was alkaline 1012, contained pus, bacteria, triple phosphates, and had a very offensive odor. A skiagraph was taken and a large stone two inches by one and a half was observed, which was crushed and thoroughly removed by operation. For six months he was perfectly well, then he began to have symptoms of recurrence, for which he consulted me in May. A skiagraph was again

taken. A large stone one and a half inches by one inch was seen in the bladder, in the right ureter about an inch from the bladder wall were two calculi, one the size of a hazel nut, and the other very minute, in the left ureter in the same position was a calculus the size of a pea. I am thoroughly satisfied that the removal of the bladder stone was complete at the first operation, for after the last fragments were removed the washing bottle was used several times but no clicking could be obtained. The stone was removed by litholopaxy. A subsequent skiagraph showed the bladder to be perfectly free of any fragments, but the ureteral calculi were in the same position as previous to the operation. There is very little doubt in my mind that a small calculus emerged from the ureter, and, lodging in the bladder, rapidly grew to the size of the present stone. Many recurrences both after lithotomy and litholopaxy probably arise in this way.

BILIARY CALCULI.

In these cases the Roentgen method is not of so much value as in urinary calculi, because many difficulties surround the technique of skiagraphing gall stones. In many cases, in which gall stones are present, we are unable to obtain the desired skiagraphic evidence, but in time I think that all the difficulties will be surmounted. If by means of the X-rays we obtain shadows of the calculi, we can render a positive diagnosis immediately. If the calculi are small it indicates that a course of medical treatment, such as the intelligent use of the Carlsbad Sprudel Salts should be advised, as there is a possibility that the calculi may be passed. If the calculi are large and there is no possibility of their passing the biliary ducts, an operation should at once be recommended.

Mr. F., age 52, a patient of Dr. McClenahan, has had several attacks of biliary colic, but never any jaundice. Skiagraph shows numerous small calculi very distinctly. The patient was placed on medical treatment and many small stones were passed in the stools. When last heard from he was entirely well.

Mrs. H., age 40, had several attacks of biliary colic, gall bladder very much distended. Many small and large stones were shown in the skiagraph.

Mrs. H., patient of Dr. Boyes, had persistent vomiting and nausea, but never any colic or jaundice. Distended gall bladder could be palpated. Skiagraph negative. I removed two enormous calculi by cholecystotomy, with complete recovery from all symptoms.

Mrs. M., has had biliary colic for years, no distention of bladder. X-rays showed several large calculi and numerous small ones. Operation confirmed the skiagraph. Recovery.

Mr. W., age 45, patient of Dr. Rogers. A case of suspected cancer of the liver and gall ducts, with intense jaundice and a metastatic deposit in the umbilicus. Skiagraph showed enlarged liver but no calculi could be observed. An operation was performed for relief of the distended gall bladder, the diagnosis of cancer was confirmed, but a large gall stone of very soft consistency and many very small ones were found in the gall bladder.

Mrs. C., age 43, referred by Dr. Gaviller, had several attacks of biliary colic, gall bladder distended. A large calculus was seen in the skiagraph. Confirmed by cholecystotomy. Complete recovery.

A REPORT OF THREE CASES OF DIABETES MELLITUS.*

By DR. GEO. HODGE, LONDON.

Diabetes mellitus is always a grave disease, and especially so in young adults and children. Under a recent method of treatment—a diet regulated in *quantity* as well as in *quality*—many cases, which would heretofore have run an unfavorable course, are now treated with a considerable measure of success. A knowledge of the pathology of the disease is essential to its rational treatment.

In health, carbohydrate food is taken into the system, and in the alimentary canal is converted into a soluble product, which is absorbed and carried to the liver, where it is stored as glycogen. The liver, by a regulating mechanism, converts glycogen into sugar, which is carried to the tissues and assimilated. By abnormal conditions these functions are upset, the liver does not store glycogen, but allows the carbohydrate food to pass directly to the circulation as sugar. Not only is there an interference with the glycogenic function of the liver, but there is also a failure of the sugar-destroying function of the tissues. This latter fact has been established by Professor Bouchard, who has worked out the consumption of sugar in health and disease. He has shown that young, thin persons, in health, consume much more sugar, per kilogramme of body weight, than aged, fleshy people. He has also calculated the amounts of sugar consumed per kilogramme of body weight by a number of diabetics, and has compared the results with the figures obtained from normal individuals of the same age and weight, and found that all diabetics exhibit a very great reduction of their sugar-consuming power.

The treatment should aim at restoring the sugar-consuming power of the tissues. This is to be done by constructing a diet, as far as possible free from carbohydrate, and which will contain an amount of heat units proportional to the weight of the patient. According to Bübner, a man consumes the following quantities in twenty-four hours for each kilogramme of body weight: During repose, 32.9 heat units; on slight work, 34.9 heat units; on moderate work, 41.0 heat units; on hard work, 48.0 heat units. So that a person weighing 150 lbs. (75 kilos.) would at slight work require daily a food equivalent to about 2,600 heat units. A diabetic would require, in addition to this, a quantity of food equal to the amount of sugar excreted daily by the kidneys. Thus given the heat units of certain articles of diet and the percentage of carbohydrate they contain, it is

* Read at meeting of London Medical Association.

an easy matter to construct a diet suitable for any case that may come under one's care. By, from time to time, estimating the amount of carbohydrate food taken and the quantity of sugar excreted, we are able to say how much sugar is being assimilated, and as the power of the tissues to assimilate sugar increases, we must carefully add more carbohydrate food to the diet.

In cases of glycosuria and the more chronic cases of diabetes, this mode of treatment will be attended with excellent results. In acute cases, met with most frequently in young adults and children, no method of treatment seems to exert any beneficial influence.

The following cases will illustrate the hopelessness of this disease in children:

CASE I.—George N., a lad aged 16 years, consulted me on the evening of August 11th, 1896. He worked in a store, and on his way home from work called at my office, complaining of feeling weak and of severe headache. He was thirsty, and had a temperature of 103°F. From his appearance and symptoms, I thought he was developing an attack of typhoid fever. I advised him to go home at once and go to bed, and remain there till I saw him. On the morning of the 12th I saw him, and found his temperature normal, but he still complained of being thirsty, and also of feeling weak and tired. I was at a loss to know the cause of his symptoms. I saw him again during the forenoon of the 13th. I now got a history of frequency of passing urine. I asked for and obtained a sample of urine, which, on examination, showed that it was acid, sp. gr. 1025, contained sugar in large quantity, but no diacetic acid. The quantity passed during the next twenty-four hours was 150 ounces. At midnight of the 13th I was called to see the patient, whom I found restless and complaining of great oppression of breathing. During the 14th he continued restless, and gradually passed into a condition of coma, and died at 9 a. m. on the 15th, *i.e.*, just three a half days after I first saw him, and two days after I found sugar in his urine. Careful inquiry regarding his condition prior to the time when I first saw him failed to elicit any evidence which indicated that his illness was otherwise than of short duration. He slept with an elder brother, who was quite positive that he had not been rising during the night to pass urine, and that he did not complain of weakness till two days before I saw him. On Sabbath, the 9th inst., he went to church in the morning, but was compelled to leave during the service because he felt faint. He felt well enough on the afternoon of the same day to go to Sabbath school. He went to work on Monday, but said he felt weak. On Tuesday he again went to work, but was compelled to leave his place of business during the day.

CASE II.—On July 20th, 1900, Olive S., aged 7 years, was referred to me by Dr. Meek, who, upon examination had found sugar in her urine. A maternal aunt died of diabetes mellitus some years ago. This child had complained of weakness, loss of flesh and the passing of too much urine since April, 1900, but continued to go to school till the end of June. The parents did not consider her condition sufficiently serious to warrant them in consulting a physician till the present. Examination of the urine on the 22nd showed it acid, sp. gr. 1034; albumin, a slight quantity; sugar in large quantity; no diacetic acid. I saw the child on the afternoon of the 22nd, and found her restless, complaining of oppression of breathing and listlessness. I understand that she gradually sank, and died on the 23rd. This child was evidently ill for a little over three months.

CASE III.—On December 16th, 1900, the father of Isabel C., aged 5 years and 4 months, called me by telephone, and said he wished to tell me about her. She had been passing urine too frequently, and had been rather easily tired for some days. He did not think there was much wrong, but thought he would like to report her condition. I asked for a sample of urine, which I obtained the following morning. It was clear: sp. gr., 1045; sugar in large quantity; acid in reaction; no albumin. Amount passed during the 24 hours after the urine was examined and the diet restricted, 30 ozs. No auto-acetic acid. After examining the urine I told the parents of the hopeless condition of their child. It was difficult for them to realize what I said, inasmuch as the child had been going about as usual, was at Sabbath school the day before I gave the grave prognosis, and was at that very time quiet, as much engaged with her dolls as she had previously been and was looking forward with much delight to the coming of Santa Claus one week hence. There was no history of unusual thirst. When the parents were asked regarding this, they said that possibly she did drink more water than usual latterly, but added that all their children drank a great deal of water; but they did not think she drank more than the others. The father volunteered the statement that she had lost flesh lately. Her appetite was less than usual for some time. She had suffered from a slight cold for about a month. On Dec. 20th, *i.e.*, three days after I examined the urine, I was called to see the child, and found her complaining of breathlessness and very restless; 21st, 8.30 a.m., Still recognizes friends. Slept little during the night; hands and feet cold; almost pulseless; 9.30 p.m., patient continued restless during the day, but now did not recognize any one—comatose. The coma became more profound, and she died at 3.15 a.m. of the 22nd inst., *i.e.*, in less than five days after I examined her urine, or about five and a half days from my attention had first been called to her case.

THE REDUCTION OF TURBINAL HYPERTROPHIES.

By D. J. GIBB WISHART, B.A., M.D.

This subject is perhaps worn threadbare—or it is too trivial a one with which to detain the members of a learned society—and yet I believe that you will all agree that on the question of the reduction of a turbinal hypertrophy something still remains to be said, and, further, that a great deal of what has already been said has led to abuses in the way of treatment.

It is true, and probably will always remain so, that a “stuffy nose” is the most common of the complaints of those of our patients who have become conscious that they own a nose, a condition that we describe under the title of “Chronic Hypertrophic Rhinitis,” although there is frequently little true hypertrophy to be found present. The tissues that are the offenders in this instance are the inferior turbinal bodies, with the mucous membrane covering them, and the sub-mucous erectile, or vascular tissue, that lies between this membrane and the bone.

Either through an increase in the connective tissue elements themselves, or through a multiplication and distension of the blood interspaces or sinuses, these tissues occupy a relatively greater space than they should, and cause a narrowing of the respiratory area of the nose.

The process need not be confined to the inferior turbinal body, but is to a lesser extent often found in the middle turbinal, chiefly at its anterior extremity and lower border, and in a still lesser degree in the coverings of the septum, anteriorly over the cartilage, and posteriorly just at the edge of the posterior nares, or over and around the apex, or sharpened edge of a septal deflection, which is chronically in contact with the outer wall.

Again, as we well know, while the process may be co-extensive with the inner or free surface, and the lower or free border of the turbinal body, it is apt to be exaggerated at one or more points, the favorite being the anterior and posterior extremities, the former interfering with free inspiration, and the latter with free expiration.

There are other elements which assist in producing the nasal stenosis, if not by direct influence upon the turbinal bodies, at least by so narrowing the passage that a lesser hypertrophy of the turbinal bodies suffices to produce obstruction; the commonest of these are deflections and irregularities in the surface or in the position of the septum, but we also find variations in shape, projection, and position of the turbinals themselves, and at times the whole nasal cavity is contracted congenitally without any of the component parts being chiefly to blame.

The above description has been necessary, because I have desired to show that respiratory insufficiency is not a simple, but a complex problem, requiring the most careful exploration by the eye and probe, and always with the assistance of cocaine and supra renal extract. This exploration must be done deliberately, after obtaining the patient's own account of the difficulty experienced, and with the elucidation provided by further questioning as we proceed with the examination.

More remote, but still most important considerations in a proper estimation of these cases, are the occupation, the environment, the climatic conditions which obtain, the nervous mechanism of the patient, the habits of life, the use of alcohol, tobacco, etc.

In no case can the surgeon rightly hope to arrive at a just conclusion of the precise measure to be adopted to relieve the nasal respiratory insufficiency, until he has canvassed each and all of the above elements in its production and maintenance, and has applied his matured experience to the solution of the problem.

In defiance of the considerations involved, and of the frequency with which the surgeon is called upon to deal with these cases, there is only too great reason to believe that they do not receive either proper diagnosis or treatment at the hands of the general practitioner, or, let us but whisper it, at the hands of the specialist.

If this be so—and every year of experience convinces me that a nasal insufficiency is always a difficult problem, and that failure to relieve is generally due to a failure to obtain a grasp of the elements of the problem—is it not the case that we are ourselves to blame?

How often do we read articles in which some "blanket" form of treatment is set forth in the well known terms of the patent medicine, as curing insufficiency and all allied near and remote conditions; and the general practitioner, for whose benefit these particular articles are always copied whole and scattered widely by means of the \$1 a year medical journal, furnished to all the profession, thinks that he has found a sovereign specific, and hastens to the assistance of his victim, confident in the fact that Dr. Blank, the eminent specialist, has "abandoned all other forms of treatment" in favor of this new method.

I desire to dissent most vigorously from such careless bargain day method of treating any form of nasal complaint, and especially turbinal hypertrophy, because it is so common, and because it is the one form of nasal trouble which the general practitioner is most likely to consider himself able to deal with. No, every case of nasal insufficiency requires careful diagnosis, and as careful treatment, each case strictly upon

its own merit, and from this it will follow certainly that every case may have a treatment differing in some detail from any other of its class, just to the extent that the shape of the turbinal bone, the position of the septum, the degree of the hypertrophy, the occupation of the patient, etc., may determine.

Turbinotomy, partial or complete, supra or a sub-mucous, cauterization, swabbing, spraying, linear incision, the cold or hot snare, all have their uses, but must not be abused, nor can the surgeon limit his treatment to any one of these. The utmost judgment is required in their use, and none of them are to be trifled with.

It is to be noted again that it is frequently urged by the advocates of some particular method of treatment that the others have been abandoned because the results were not permanent. Their result of treatment—permanency—is surely not one that can legitimately be expected in the treatment of the great majority of cases of turbinal hypertrophy, namely those where a reduction of the soft tissues will relieve the stenosis; in other words, it can only legitimately be expected where there is removal of bone or cartilage. This fact, however, is one that seems to be forgotten, or perhaps the surgeons believe permanency can be attained, and they endeavor to give effect to their beliefs.

How is it possible to so alter the turbinal tissues, that a patient may live on in the old surroundings, at the old trade, with the same nervous system and exposed to the same climatic conditions, and yet expect that these will not reproduce the nasal stenosis which they had so large a share in producing before.

It is certainly true that nasal insufficiency is a very common disorder in the cities which border our large lakes, whose inhabitants are exposed to such varying conditions in the temperature and moisture of the air they breathe; with the thermometer ranging from fifty degrees above to ten degrees below zero, in the twenty-four hours or less; with the wind that brought us snow from the north-west, veering round to the south-east, from whence it brings us rain next day—conditions which prevail on our great lake shores for at least four months of every year. It is nonsense to expect that the application of any drug or instrument to a turbinal hypertrophy can forever free the nasal passages of these citizens from the necessary effects of this climatic strain.

The tendency of turbinal hypertrophy is always toward a return, and the manner in which this should be met is not by wholesale destruction of the turbinal tissue, or by the securing of a patency of the respiratory area by an extensive removal of bone. We should advise our patients that they must sub-

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mit themselves for regular examination, and regular treatment every six months, or at the utmost every year, and that if they but comply with this simple request, they will continue to enjoy at slight expense, and with moderate treatment, comparative immunity from the nasal insufficiency.

This is but urging the same line of action as we adopt with regard to the care of the teeth, and as we would probably adopt with regard to any other part of the body which was liable to break down.

In the December, 1900, issue of the *Laryngoscope*, Jackson mentioned a surgeon who for years had been cutting out both middle and inferior turbinals on both sides for the cure of every human ache and ailment wherever located. He should go further and substitute for the nasal mucous membrane and the structures upon which it is super-imposed, some device of equal usefulness with a complete set of artificial teeth, or the artificial larynx, and I ask their pardon for introducing them to such a companion, although the patient would be rendered immune to the effect of climate and entourage, and the surgeon's name would become immortal in Hades.

I am thankful to say that I have but once done a complete turbinotomy, and that was an accident. Total removal of a turbinal for nasal insufficiency I can hardly conceive of as possible, and it must be very clearly indicated indeed if even partial removal is thought of. The aim must always be to save every line of nasal mucous membrane that is possible, and therefore I would prefer to adopt the sub-mucous galvanopuncture, or the turbinal trocar, or the anglar handled Graefe knife, introduced through a linear puncture, in every instance that will admit. The spokeshave is inadmissible in the nose except for uses which I have indicated elsewhere. (See *Laryngoscope*, July, 1900), and the scissors or snare can accomplish all the clipping of the turbinal that is required.

Let us unite in advocating a conservatism in our methods of treating nasal insufficiency, and our patients will thank us, and our influence upon our fellow-practitioner will be for good and not harm.

47 GROSVENOR ST., June 20th, 1901.

Society Reports.

ONTARIO MEDICAL ASSOCIATION.

The twenty-first annual meeting of the Ontario Medical Association was held in the Educational Department, Toronto, on the 19th and 20th of June, 1901, the President, Dr. Angus McKinnon, of Guelph, in the chair. The secretary read the minutes of the last session of last year which were adopted.

The report of the Committee on Papers was presented by Dr. Machell, of Toronto, and the report of the Committee on Arrangements by Dr. Bruce L. Riordan.

Three Recent Gall-Stone Cases.

Dr. Wm. Oldright, Toronto, said that these cases had occurred recently in his practice. They present features of interest to the profession. The first case occurred in a woman about fifty-five years of age. He was rather surprised to be called upon to see her in a hurry, to find symptoms of gall-stone obstruction. The late Dr. Little had seen the patient and had endeavored to obtain purgation without effect. Powerful cathartics were unavailing. About nine months previously she had a similar attack, but Dr. Oldright had heard nothing about it until this attack. The symptoms were: somewhat elevated temperature (about 100 to 101), constant vomiting, obstruction, and, of course, intense pain. He supplemented Dr. Little's catharsis, but without any effect. On examination he could map out a distinct tumor, and told her that she had a distended gall bladder; advised her to go into the hospital, which she did that night. She was operated on in the afternoon, and he removed some gall-stones and endeavored to establish patency of the duct. He could feel no stones left behind, but there was some stenosis of the duct. There was a great deal of inflammatory action in this case. The gall bladder was stitched into the abdominal wall and drainage established in the usual method; bile flowed freely. The patient made a good recovery. The second case was one Dr. Oldright saw in consultation with Dr. McLean, of Woodbridge. She was sixty-five years old. The prognosis was certainly death without operation, and provided there was no malignant trouble she would probably recover. In this case one could imagine the difficulty there would have been had it been his first case of operation, as he could not locate the gall bladder. He came to the conclusion that it was not a case for further interference. Within twenty-four hours she succumbed to the shock, and probably to some hemorrhage. There was

no doubt after passing the finger in that it was malignant. If this woman had been operated on some years before, Dr. Oldright thought that malignancy would not have occurred and her life would have been saved. The third case occurred in a woman forty years of age. Upon her the surgeon operated last February. Here was a case in which there had been gall-stone symptoms, obstruction, for about eighteen months. She consented to an operation. The obstruction was in the cystic duct. He opened the gall bladder and took out the stones which he exhibited to his audience. The operation occupied about forty minutes. The patient made an uneventful recovery, and left the hospital thirteen days after the operation.

Dr. Garrett, of Kingston, said that operative interference in gall bladder surgery had only recently been brought into prominence. Early diagnosis is very important. We should operate at once when we make a diagnosis. He referred to a case which had been diagnosed as catarrh of the stomach upon which he had operated and had extracted 170 stones from the gall bladder.

Dr. T. Shaw Webster, Toronto, asked Dr. Oldright if there are not some cases where it would be better to wait for a little while, in cases where there is a strong probability that the condition will disappear in a short time.

Dr. Oldright in reply: As soon as we are satisfied of gall-stone obstruction, as soon as acute symptoms have subsided, we should operate, and not allow repeated attacks to go on until malignant disease is established.

Excision of Upper Jaw for Sarcoma.

Dr. Herbert A. Bruce, Toronto, presented this paper, whilst Dr. G. Silverthorne exhibited the specimen. Dr. Bruce also presented the patient, a woman thirty-four years of age, from whom he had removed the upper jaw for sarcoma. The patient had been sent to him by Dr. Bowles, of Woodhill. The history of the patient is, briefly, as follows: During the last week of January of this year she felt, for the first time, a slight swelling over the alveolus of the left jaw, which she thought to be a gum-boil. She consulted Dr. Bowles at the end of March, and Dr. Bruce saw her about the middle of April—that is less than three months after the first symptoms. Dr. Bruce operated upon her on the 29th of April, exactly three months after she had the first symptom. On examination he found a very hard swelling just behind the second bicuspid tooth and extending backwards to the full extent of the jaw. Internally, it had not extended to the middle line, and bulged externally to the extent of half an inch beyond what would be the line of the teeth. It extended backwards towards the antrum, but the latter did not

seem to be implicated externally. The growth in the roof of the mouth was covered by mucous membrane. On looking into the nose a polypoid mass was seen, and the patient had some difficulty in breathing through the left nostril. The cheek on the affected side was slightly more prominent, and it moved freely over the growth. No prominence of the eye on the affected side was to be made out. A small portion of the growth was removed under cocaine, and Dr. Silverthorne reported to Dr. Bruce that it was sarcoma. The patient left the hospital on the 18th of May and made an uninterrupted recovery.

Dr. Silverthorne presented the specimen to the members of the Association. It was the size of a large-sized orange, containing spindle cells with a cartilaginous basis.

Dr. Bruce stated that the history of the patient showed that a polypus had been removed about eight years ago, but he thought that it must have been a simple polypus.

Ectopic Gestation.

Dr. R. W. Garrett, Kingston, extended his thanks to the Committee on Papers for placing under his care a subject of such great magnitude. The subject is one of vital importance to every practitioner, for at any time he might be called upon to differentiate the condition from others with which it might be confounded. The responsibility of a life was in his hands, and demanded accurate diagnosis, medical acumen and judgment and ability to conduct the case to a favorable termination. He entered at considerable length as to the causation and earlier changes consequent upon ectopic gestation, and stated that every physician is expected to make a correct diagnosis of tubal pregnancy on the occurrence of rupture; and in a fairly large proportion of cases, to make a diagnosis before the occurrence of rupture. Theoretically the arrest of a fructified ovum may occur first in the ovary; second, in the abdominal cavity between the ovary and tube; third, within the tube; and fourth, between the tube and the uterus. He would direct the attention of his audience to but one kind only,—arrest within the tube, or tubal pregnancy, as all other varieties are but merely developments of this kind, owing to secondary invasion of the fallopian tube. These he divided into three groups: First, tubo-abdominal, or simply abdominal pregnancy, in which there is a secondary invasion of the abdomen; second, tubo-ligamentary, in which there is a secondary invasion of the broad ligament and subperitoneal tissues; and, third, that sub-division of the tubo-uterine in which there is rupture into or secondary invasion of the uterus. At considerable length he discussed the etiology, then the

symptoms, pointing out the difficulties that lie in the road to making a diagnosis owing to the absence of many, if not all of the classical symptoms generally enumerated. Having dealt in a masterly manner with these, he recited a very interesting case in illustration of his contention of the difficulties of diagnosis.

Dr. J. F. W. Ross followed Dr. Garrett in the discussion regarding the diagnosis as the most important point of all, and especially the diagnosis before rupture. He thought that we ought to be able to diagnose these cases before rupture had taken place. What are the symptoms? Generally four or five symptoms. He referred to the pain that is indefinite, not severe, not acute, but a feeling as if something were wrong. He referred to several cases recently seen in practice.

Dr. Powell referred to a case where Dr. Ross had diagnosed these conditions before rupture had occurred.

Dr. Oldright mentioned a double rupture of both tubes.

Dr. A. A. MacDonald complimented Dr. Garrett on the careful manner in which he entered into his subject, and thought it was one of the greatest importance to the general practitioner. He remembers the time when it was stated that no one could make the diagnosis before rupture. He referred to a case which came into Bellevue Hospital, in Toronto, comparatively recently—a case of twins, in which one child was delivered in the natural way, and the other child ectopic.

Dr. T. S. Webster said that the subject was one that he had taken a great deal of interest in, and has had to deal with four of these cases.

Dr. Prevost, Ottawa, showed a specimen and said that sometimes, in spite of the most accurate diagnosis, we make mistakes. He described the case, the specimen of which he presented.

Dr. A. F. McKenzie, Monkton, referred to a case seen in his practice, which went on to full term and was delivered of a large child and no trouble. He further spoke of the difficulty in making the diagnosis in these cases.

Dr. Machell thinks the interest centres in the diagnosis.

Dr. McKinnon, the President, stated that he had not had much experience with these cases before rupture, but had had a little experience after rupture. He thought frequently there might be danger in making a mistake. He also cited a case occurring in a young married woman with a little child five or six years old.

Dr. Garrett closed the discussion, and thanked the members for their generous treatment of his paper. He considered that discussions of this character were of the greatest moment. Rupture is generally about the third month, and interstitial pregnancy can go on to a much longer term than tubal pregnancy, and in this form we generally have external rupture.

FIRST DAY—AFTERNOON SESSION.

PRESIDENT'S ADDRESS.

Dr. McKinnon delivered a very able address on the opening of the afternoon session. He considered that it was a great honor to be elected president of this, the largest and most influential medical association in the Dominion of Canada. Having referred to the success of the meeting so far, he proceeded to contrast the state of medicine at the beginning of the last century with that of the present, and compared the vast advantages we to-day possess over those of one hundred years ago. Anesthesia, antiseptics, asepsis, vaccination, the anti-toxin treatment for diphtheria, the discovery of the bacillus of tuberculosis were mentioned, and he looked for the dawn, in no far-distant day, of that grand and glorious day when we can say to the world that tuberculosis and cancer can both be cured. He deplored the growth in the employment of new proprietary remedies, and thought that harm was being done to the medical profession by manufacturing firms making up pills for neuralgia, for malaria, etc. He considered that the literature and drugs sent out to medical men by these manufacturing houses had become an intolerable nuisance. The electric belt man, the Christian Scientist, the advertising cancer-curer, the osteopath, and many other such like fakes which hang on to the skirts of medicine, he scored most unmercifully, and regretted that the public press, both secular and religious, opened their columns freely to these fulsome, untruthful, and sometimes immoral advertisements, because they pay well. There was great danger to the public in permitting Christian Scientists, the "pray-for-hire healers" and the "Dowieites," impudently undertaking to cure infectious diseases, such as diphtheria, scarlet fever and smallpox—diseases which they are unable to recognize, and he thinks that we have come to a point where toleration and forbearance become criminal. The 2,500 medical men in Ontario should have influence enough to obtain from the Legislature an amendment to the Medical Act that will put an end to this trifling with human life. He directed attention to the delay that occurs in securing admission to the asylums for people, the subjects of acute mania, and thought it was high time the necessary steps in this department in the practice of medicine should be simplified.

Pulmonary Tuberculosis—Its Treatment in Special Sanatoria.

Dr. J. H. Elliott, Medical Superintendent of the Sanatorium at Gravenhurst, read this paper. Speaking generally, it may be said that from fifty to seventy per cent. of the incipient

cases are restored to health, while from all classes from fifteen to thirty per cent. are reported cured or arrested; in sixty to seventy per cent. a marked improvement. The first thing noticeable after entering the sanatorium, in most cases, is an improved appetite, a gradual gain in weight, and a decline in the evening temperature. With this improvement night sweats disappear without medication, the cough and expectoration noticeably lessen, and the patient sleeps until morning. The principles generally adopted are: First, a continual life in the open air, with rest or exercise as indicated; second, a liberal, suitable diet; third, medicinal treatment according to indications, and to a great extent symptomatic; fourth, hydro-therapy; fifth, a strict medical supervision of the patient's daily life.

Speaking of the "rest-cure" in febrile cases, the object is to reduce muscular exertion to the least point consistent with the ingestion and proper assimilation of a good diet. Referring to medical treatment, with a hygienic life pure medicines are required. The various tuberculins and serums are being used both in America and Europe, with the prospects of yet securing a specific for those cases where mixed infection is absent. Constant supervision of the patient is the most important point in which the sanatorium treatment must necessarily differ from that adopted by the general practitioner. Living, as he does, with his patients, adopting their mode of life, having his meals in common with them, the physician is enabled to individualize the treatment, and though on broad lines the patients all receive the same treatment, each one has to be studied in detail, and the indications met accordingly. The chief point, under all circumstances, is that the patients, wherever they be, live prudently, and be under the care of an intelligent and firm physician.

Dr. Price-Brown referred to the advisability of sending patients for sanatorial treatment, and stated that we have for every disease places to send our patients—hospitals throughout the length and breadth of the land—except for tuberculosis. Having recently been at Asheville, N.C., he described the treatment which he had seen carried on in that institution.

Dr. John Hunter, Toronto, deprecated sending these patients long distances away from their homes, which was formerly the custom, but is not so now. He hoped to see the time when there would be a large number of these institutions established in this country.

Dr. Elliott, in reply, emphasized the point that there should be no exercise when the evening temperature is above ninety-nine degrees; it may be permitted in the morning if it reaches one hundred or one hundred and a half, but not in the evening.

Vaccinal Protection Against Smallpox.

Dr. P. H. Bryce, Toronto, the Secretary of the Provincial Board of Health, presented this paper. In the introduction to his paper he expressed the belief that although the practice of vaccination against smallpox has existed for a century, there never was a time since it was formally accepted by the profession, when there was so much expressed scepticism as there was to-day on the part of the laity with regard to its protective qualities, and never a time when the profession has been so indifferent as to impressing the necessity of its proper performance upon the public. In Ontario, between 1898 and 1899, there were but twenty-two recorded deaths from the disease. He made special reference to the art of vaccination and the quality of the lymph, and thought five separate insertions should be made in each case. The quality of the lymph was very important. He thought that a medical man going out from college did not receive sufficient practical instruction on this most important subject.

Mr. I. H. Cameron discussed Dr. Bryce's paper and stated, as a matter of fact, he had no hesitation whatever in seeing a case of smallpox himself, nor would he object to any member of his family seeing it, if he knew that they had sufficient protection through vaccination. He warned the profession against laxity in dealing with this most important subject.

Dr. Harrison, Selkirk, stated that he had had considerable experience with smallpox, and on account of that experience he entered a vigorous protest against the prevailing carelessness in insisting on vaccination and re-vaccination in the laity as well as the profession.

Dr. John Hunter, stated that in many cases he had failed to secure successful vaccination.

Dr. Geikie considered that Jenner's discovery was one of the greatest and grandest achievements in medicine.

Dr. Price-Brown referred to a case in the General Hospital in the year 1866.

Dr. Rudolf asked Dr. Bryce whether the instructions given along with lymph supplied by different firms were not partially to blame for the insufficient vaccination among the profession. He considered that no one should be guided by those instructions.

Dr. Bryce, in reply, thanked Mr. Cameron for taking up the discussion. He considered that the profession was lamentably ignorant of the nature of protection and protective qualities of vaccination itself.

Dr. D. J. Gibb-Wishart suggested that a resolution be passed by the Association expressing its approval of from three to five insertions and advising manufacturers interested in the matter.

Dr. Thistle thought that they should not stipulate the number of marks, that it would not be wise, as many successful vaccinations had been obtained from one mark.

Dr. Stewart, of the Ontario Vaccine Farm, Palmerston, thought four or five marks better, so situated that there would be no coalescence.

Dr. McPhedran did not wonder that the younger members of the profession were weak as regards the diagnosis of smallpox when facilities for instruction in clinical work was absolutely nil, he had repeatedly asked to be permitted to take a class to the Infectious Diseases Hospital, but had always been denied.

Dr. Noble, Philadelphia, thought as a surgeon that something else might have been said about the care of the vaccination wounds. The wounds should be protected, so that there would be no chance of infection.

DISCUSSION ON EMPYEMA.

Medical Aspect.—This subject was introduced in a well prepared paper by Dr. Ferguson, London, who said that the treatment of this condition was essentially surgical, and that the medical aspects of the disease were limited to a consideration of its pathogenesis and prophylaxis. He considered that the conditions of non-purulent or primary effusion indispensable to an understanding of the pathogenesis of empyema. He gave a description of the pleura and discussed the bacteriological aspect of purulent pleurisy, which he divided into four classes: First, those due to pneumococci; second, those due to streptococci (and staphylococci); third, those due to the bacilli of tuberculosis, and fourth, those caused by saprogenic organisms. In nine cases, extending over eleven years in his practice, three were diagnosed tubercular, three meta-pneumonic, two due to the streptococci, and one undermined. The prognosis varies with the micro-organism present, the pneumococci being the most benign. It is the only variety of purulent empyema that may possibly yield to treatment by mere aspiration, especially in children. Tubercular empyema is usually mixed infection. The prognosis here will depend upon the general condition of the patient and the character of the mixed infection. We therefore see the importance of a bacteriological examination as in any other debilitating disease, supporting and tonic treatment is essential. With the advent of pus, surgical means must be adopted.

Surgical Aspect.—Introduced by Dr. J. L. Turnbull, Goderich. When the presence of pus is determined it should be evacuated at once, as there is always the danger of the abscess bursting into or through the chest wall, or even through the diaphragm and producing peritonitis. Aspiration need not be

described; remember not to remove the fluid too rapidly. In this, as in an ordinary abscess, it is not necessary to open at the most dependent point. The preferable way, and the one which Dr. Turnbull always uses when a diagnosis of pus is made, is to remove a portion of a rib; an inch and a half may be cut out, preferably with the saw, under strict antiseptic precaution. Dr. Turnbull advises washing out every day when pus is offensive, and the drainage tube gradually shortened until it can be removed altogether. Where a cavity and sinus remains after this operation, the sinus may become closed and a second empyema established. This requires an Estlander's operation, and one of the best ways is to carefully locate size and boundaries of cavity with a probe, and after dissecting up a flap of skin, to be sure to remove enough bone. The hard fibrous tissue beneath the ribs, which is always present in quantity there, must be thoroughly removed. Dr. Turnbull advises mopping out with pure carbolic acid, then with alcohol to prevent poisoning and then with sterilized water, the part being carefully dried.

Dr. J. C. Mitchell considered that these cases should be dealt with purely on the same principles as an ordinary abscess. He has seen more cases in adults than in children. He considers that a good many of them are tubercular.

Dr. Powell took exception to Dr. Mitchell styling empyema as being only ordinary abscess. He considered that it was something more, because lung was pressing on one side of it. He exhibited an instrument which he used in the operation.

Dr. John Hunter mentioned a case where air entered the cellular tissue in the skin, and universal empyema set up.

Dr. Primrose considered it an important point to know whether the case was one of mixed infection. He does not think we have taken all the advantage we might do of the researches that are made in the bacteriological laboratory.

Dr. Thistle said that one point had not been referred to which he considered of first importance in successful treatment—the time at which operation should take place. That is the crucial point in securing success in these cases. The earlier the operation is done the speedier the cure, and in many of the cases which run into chronic empyemata, the result was due to the lateness of the operation.

Dr. McKeown said that there were three points of importance, to his mind—recognized that pus is present; that we want to get at it; and that we want to get the cavity closed up.

Dr. McPhedran considered that these cases should be diagnosed very early, and are easily treated, as a rule. One should be on his guard in a case of pneumonia when the temperature

falls about the eighth day to near the normal; if it commenced to rise again it is suspicious of empyema.

Dr. Freel, Stouffville, considered that it was better to resect the rib with proper dressing and tube than to aspirate.

Dr. Rudolf—So far it seems to be the opinion of this meeting that where pus is discovered in the plural cavity it should be removed by operation. He thinks there is one exception to that; that is, where an empyema exists along with tuberculosis of the lungs. In this condition, where pus is found, it should not be at once removed without careful consideration.

Dr. Turnbull, in reply, considered that it was best that the rib should be removed in every case. He does not think it necessary to wash out the cavity in every case; only where the discharge is offensive. The tube should be long enough to go into the cavity.

Dr. Ferguson, in reply—Early diagnosis, with the aid of the bacteriologist, will add much to the after treatment.

FIRST DAY—EVENING SESSION.

Open-Air Treatment of Disease.

By Dr. George H. Carveth, Toronto, who described his method of treating different forms of disease: First, in the house with wide-open windows; second, in beds on the verandah; third, in beds under tents on the lawn. At first he experienced some difficulty in getting his patients to consent to be treated in this manner, but after they had become habituated to life in the open air, they returned indoors reluctantly. Some of the cases that he has treated in this way are iritis, cases of fracture, cases of the radical cure of hernia, rheumatoid arthritis, tubercular disease of the spine, typhoid fever, and a case of hysterectomy. His address was illustrated by lantern slide projections on the canvas, which proved very interesting to the members of the Association.

Dr. P. H. Bryce spoke of the value of treating smallpox patients in tents. The tents should be double roofed, and double floored, and double walled, and each tent provided with a stove. The patients lived in these when the thermometer was 20 degrees below zero, being quite comfortable. Nobody died, although many were seriously sick.

Dr. Freel, Stouffville, recited the history of the case of a clergyman, the victim of tuberculosis, who lived in his tent all winter when the thermometer was 20 degrees below zero, and the wind blowing a perfect gale, and he was very comfortable. In a few months' time he ceased sweating, and gained very rapidly in weight, to such an extent that delivering a sermon

would not throw him into a perspiration, as it always did before he took up tent-life on his lawn.

Dr. J. H. Elliott, Gravenhurst, saw no reason why out-door life should not be employed in the treatment of other diseases as well as tuberculosis. It is not specific, and the only reason it is used is to strengthen the organism to resist disease. It is practically returning to primitive life, and it is so comfortable and pleasant that you find it very difficult to get patients to return to the house.

Dr. John Hunter referred to the Orphans' Home, Toronto, where they keep about two hundred children. These are admitted about four years of age and they are kept there until they are about fourteen. Their mortality in that institution is about three in one thousand. They are practically kept out of doors all the time, and comparisons between the children of the Orphans' Home and the children of the well-to-do people of the city are greatly in the former's favor.

Dr. Webster—The trouble is not so much to get the patients to sleep out of doors as it is to get them to return to the house when they have once been out of doors.

Dr. G. S. Ryerson, speaking of his visit to South Africa, said that at Bloomfontein the typhoid fever patients did particularly well in tents. The mortality was much larger in buildings improvised and used as hospitals. He considered that it was well to have the roof of a tent of material of some dark color, such as green or brown, because the patient, lying on his back, begins to complain of the color of the roof.

On the Use of Nitrous Oxide and Ether as an Anesthetic.

This paper was prepared and read by Dr. L. Coyteux Prevost, of Ottawa, and it proved to be highly interesting, carefully prepared, and ably delivered. He considers that a good and satisfactory anesthetic must possess the following qualities: First, offer the least possible harm for the patient; second, be rapid; third, complete; fourth, permanent; fifth, followed by as few disagreeable post-operative effects as possible. He then proceeded to relate the results of his personal experience during the last two years at the hospital in Ottawa, as well as in his private practice; Dr. Carroll, of Ottawa, was his assistant in this work. The agent they employ is ether, with which they lately have associated nitrous oxide, which is given at the beginning of anesthesia by the means of Clover's inhaler. He considers this method as absolutely ideal, as much for the rapidity with which the patient becomes anesthetized as for the freedom from all unpleasant sensations during the process of anesthetization and the diminution of after-symptoms so fre-

quent after operations. The apparatus which they have been using for the nitrous oxide and ether is Hewitt's inhaler, which is a modification of a Clover inhaler, with the rubber bag replaced by a large bag with valvular attachments. Within the last two years they have used this method almost exclusively, and the results are as follows: Anesthesia in one minute, twenty-four times out of three hundred and seven cases recorded; in one and a half minutes, fifty-five times; in two minutes, ninety-four times; in two and a half minutes, forty-seven times; in three minutes, forty-four times; in three and a half minutes, nine times; in four minutes, nineteen times; in five minutes, fourteen times. Dr. Prevost then entered into his observations with regard to the effect of the anesthetics upon the kidneys, and stated out of 434 observations albumen was found twenty-six times. He drew attention to the fact that post-operative vomiting was very rare. Dr. Prevost was the first surgeon in Canada to employ intro-spinal cocainization. He believes that so long as the old and well-tried anesthetic agents, handled by competent men, continue to give good satisfaction that it will not be wise to abandon them until medullary narcosis has been clearly demonstrated.

The Complications and Degenerations of Fibroid Tumors of the Uterus.

Dr. Chas. T. Noble, Philadelphia, delivered an able and exhaustive paper under the above heading, an abstract of which will be published in a subsequent issue.

Drs. J. F. W. Ross, N. A. Powell, McKinnon, and Clouse discussed the paper, to which Dr. Noble replied.

SECOND DAY—MORNING SESSION.

The Relations of Nasal Obstructions to Obscure Cases of Asthma.

This paper was read by title by Dr. Arthur W. Mayburry, of Toronto. Patients suffering from nasal obstruction are frequently coming before the notice of the busy practitioner. Asthma has a complex etiology, and the close association of this disease with nasal trouble is sometimes very remarkable. Adenoid growths in the pharynx frequently cause asthma, and in recent years much stress has been laid on the nasal origin of this disease. The author quoted Bosworth, who goes so far as to assert that asthma, in a large proportion of cases, is attributed to some form of nasal obstruction, the bronchial spasm being caused through reflex sympathy conducted along the fifth nerve.

On the importance of an Early Recognition of Locomotor Ataxia.

Dr. J. T. Duncan, Toronto, read this paper, and emphasized the importance of being able to diagnose this disease in order that prompt treatment might be applied. To do this we must be able to recognize the pre-ataxic stage. What are these symptoms? Professor Osler gives them as pains, ocular symptoms, and loss of the knee jerk. What are the ocular symptoms? Strabismus or squint; ptosis or drooping of the eyelid; the fixed pupil (the Argyl-Robertson pupil); inequality of the pupils and optic atrophy.

Notes on the Use of Adrenalin.

Dr. D. J. Gibb-Wishart, Toronto. This is the formula which Dr. Wishart has been using in his office practice, having made several hundred applications, chiefly to the mucous membrane of the nose; one in one thousand, the chloride being dissolved in normal salt solution containing 0.5 per cent. chloretone solution. A 10 per cent. dilution of the above solution, which dilution is equivalent to one in 10,000, has been sufficient to contract the blood vessels in the membranes in a few seconds, and a repetition of the same, or the use of a stronger dilution, will blanch these membranes; especially is this seen to be marked in the nose, where the membranes will become tightly drawn over the turbinated bones, which show up white through them. It has proven itself to be highly useful in rendering operations about the nose practically bloodless; it is not found to answer so well in the removal of adenoids or enlarged tonsils. Dr. Wishart mentioned two cases in particular where it acted very promptly. The bottle in which it is kept must be tightly corked; and the properties of the substance are not destroyed by heat. Since he has added chloretone he is perfectly satisfied as to the stability of the preparation for all practical purposes. In no instance has there been a tendency to increase in the amount of the bleeding. Dr. Wishart considers that the drug is a valuable addition to our armamentarium.

Dr. Duncan's paper was discussed by Dr. Wishart, Dr. Trow, and Dr. Hunter; while Dr. Wishart's paper brought out a discussion from Dr. Trow, Dr. McPhedran, and Dr. Graham Chambers. Dr. Wishart and Dr. Duncan replied respectively.

DISCUSSION ON GASTRIC ULCER.

Medical Aspect.—This was introduced by Dr. R. D. Rudolf, Toronto. In opening the discussion from a medical point of view, he gave a short historical sketch of the chief literature of the subject, and said during the last thirty years only one important symptom had been added to those mentioned by previous writers, viz.: the very common occurrence of hyperchlor-

hydria. Avoiding the consideration of the well-known points on the subject, he propounded five questions in connection with gastric ulcer which seemed to him to specially merit discussion. First, is there any relation between gastric ulcer and cancer? Trousseau believed that an actual antagonism existed between the two conditions, while Lebert considered that 9 per cent. of all gastric cancers so arose, and Rosenheim states that 5 to 6 per cent. of all gastric ulcers became carcinomatous. Clinically, the speaker had never seen a case of simple ulcer end in cancer, nor had he seen a case of cancer preceded by ulcer, although such cases undoubtedly occasionally occurred. Dr. Rudolf had seen pathological specimens illustrating both. Second: Can we diagnose the site of gastric ulcer? This question is becoming more important on account of operations. Ewald states that in 90 per cent. of cases it is impossible to tell whether the ulcer is in the stomach or duodenum, and that usually it is hard to diagnose the site in the stomach. Most gastric ulcers occur on the posterior wall, near the pyloric end. The site of the pain and tenderness; the time the pain occurs after food; the position in which the patient is free from pain, and the presence or absence of gastric dilatation may help, but these are very uncertain facts to lean upon. Thus, in Pinel's famous case, mentioned by Abercrombie, where the patient was *known* to have ulcers near the pylorus, the pain used to occur *immediately* after taking food. The taking the food may not only mechanically irritate the ulcer, but by stimulating the acid secretion peristalsis may cause pain without touching the ulcer. It must further be remembered that there are sometimes several ulcers present. Third question: Does ergot ever stop gastric hemorrhage? Most authorities recommend ergot without question, but we must remember that the hemorrhage tends to be self-limiting from the lowering of the blood pressure and the forming of a clot, and ergot may interfere with this natural cure by raising the blood pressure. Turpentine and other local styptics have no such objection, and calcium chloride increases the tendency to clotting. Fourth question: Are cases of apparently "cured" gastric ulcer "first-class lives" for insurance? The speaker did not think that they were, because sudden perforation might occur after years of quiescence (he had seen two such cases). Ulcers were apt to relapse or to break out in new places. The severer the symptoms the ulcer had been at the time, especially the hemorrhage, and the shorter the period since its occurrence, the worse the "life" was. Fifth question: As regards operation, as soon as perforation into the peritoneal cavity be diagnosed operation should at once be performed; as regards operation where no perforation exists the question was not so easily settled. Severe, uncontrollable hemorrhage might

occasionally call for surgical treatment, but the mortality from hemorrhage is surprisingly small, even when this is severe. Dr. Mayo Robson had recently recommended "that after a second bleeding, even during the course of the hemorrhage, if the patient can stand it, or as soon after as his condition will admit, the operation should be done." The speaker was glad to see that his old teacher, Dr. Byrom Bramwell, challenged this advice (*The Lancet*, March 9, 1900, page, 687). Operation for the less urgent symptoms of gastric ulcer would occasionally be necessary, but in this direction we should proceed with great caution. Dr. Moynihan, in a recent paper (*The Lancet*, April 27, 1901,) gave a summary of all the cases to date in which gastro-plasty or gastro-gastrostomy had been performed for "hour-glass stomach." They amounted to thirty-eight in all, and nine of them were fatal, while in many complete relief of symptoms occurred.

Pathology.—This branch of the discussion was led by Dr. H. B. Anderson, Toronto. In his opening remarks he said he would make no reference to ulceration resulting from the breaking down of tubercular foci, syphilitic gummata, or malignant growths, nor of ulceration occurring during the course of acute infective diseases nor resulting from the action of corrosive poisons, but would limit the discussion to a consideration of the commonly designated simple, round, perforating or peptic ulcer. From the similarity in all essential points, however, he included the corresponding ulcer at the lower end of the esophagus and in the first part of the duodenum. From post-mortem statistics the frequency of gastric ulcer was in about 5 per cent. of cases, cicatrices being found about three times as often as healed ulcers. From his own experience at autopsies in Toronto he was sure that gastric ulcer did not occur in Ontario so frequently as indicated by the above figures.

The condition occurred most frequently in adults from twenty to forty years of age, but was by no means rare at the extremes of life. The mortality was greater from forty to sixty years of age, no doubt from the lessened reparative power at that period of life. Females were affected more frequently than males, in about the proportion of two to one.

The etiological import of other diseases, especially chlorosis, was dwelt upon. Injury was a factor in rare instances, a statement substantiated by certain experimental data. Occupation, race, climate, habits—all had an indirect influence in some cases, and arterial sclerosis, thrombosis and embolism of the gastric vessels were occasional factors in the etiology of the condition.

All these facts were, however, of secondary importance, and were only active in the presence of an altered condition of the

gastric secretion. The localities where this form of ulceration occurred—at the lower end of the esophagus, in the stomach, and in the first part of the duodenum—situations exposed to the action of the gastric juice, as well as the not infrequent occurrence of post-mortem digestion of the walls of the stomach, were strongly suggestive of the importance of this factor, and this had received further direct proof from the discovery of the frequent occurrence of a hyperchlorhydria associated with gastric ulcer from a chemical analysis of the stomach contents obtained after test meals. The failure to find this condition in some cases was not proof that it had not existed at an earlier period in the disease, for the hyperchlorhydria might afterwards have been lessened as the result of the greater or less degree of gastritis following on the wake of the ulcer. Ulceration did not occur unless there was a disproportion between the acidity of the gastric juice and the condition of the blood. Normally autodigestion of the walls of the stomach was prevented, not by a simple chemical action in which the acid was neutralized by the alkalinity of the blood and fluids in the tissues, but by the vital resistance of the living cells of the part. He did not think there was anything to uphold the bacterial origin of this form of ulcer urged by some authors.

The pathological anatomy of gastric ulcer and its various terminations were discussed and illustrated by specimens. Healing was the fortunate result in the majority of cases. At other times a fistulous communication was formed with the duodenum, colon, or the cutaneous surface, or a subphrenic abscess might result. Adhesion to the pancreas, liver, or to the omentum frequently walled the trouble off. Not infrequently, however, peritoneal infection from perforation occurred, and the symptoms might be so intense as to simulate irritant poisoning. Gastrectasia, or "hour-glass" deformity, from cicatricial contraction at the pyloric orifice, or in the centre of the organ, at times gave rise to serious results. A specimen, showing the development of a carcinoma at the base of an ulcer, with a clinical history extending over many years, was presented.

Surgical Aspect.—Dr. Henry Howitt, Guelph, conducted this part of the discussion, and said: Did it never strike you as being peculiar that the best remedies, nitrate of silver, and so forth, are germ destroyers? He first took up the procedures for dealing with the ulcer or its results, in which perforation is not a factor. In all the operative procedures it was essential to prevent infection of the wound; stomach should be thoroughly washed with aseptic water, by means of siphon tube, immediately before the anesthetic is administered. It is not necessary to make the abdominal incision extensive; the length of the incision would depend upon the amount of contraction, and it is

sutured in such a manner that when closed the line of union is at right angles to the original incision. This gives excellent results when properly done. Adhesions render this ideal operation impracticable. The first successful operation in Canada was performed in Toronto, 1894, by Dr. Atherton. Up to last September in the neighborhood of 300 operations were reported, with a mortality of a little over 45 per cent. Dr. Howitt then referred to cases in his own practice. With regard to the treatment, Dr. Howitt said that as soon as we are satisfied that perforation has taken place, referring to acute cases, he believes it is good practice to give morphia hypodermically, and it further lessens the amount of the anesthetic; in the opinion of many. Success largely depends on the shortness of time before operation; delay is dangerous. It is Dr. Howitt's practice to eviscerate the bowels; one or more small incisions in the prominent coils soon overcome the distension, and each one is closed before another is made. Attention is now turned to the stomach and the part brought into the wound. The ulcer is incised and opening closed with two or three layers of sutures. When the trouble is in the posterior wall it may be impossible to excise it, in which case it can be generally inverted and closed by layers of sutures. The abdominal cavity should be thoroughly flushed with a stream of saline solution. When drainage is necessary the tubes or gauze should not be introduced through a large wound. The object should be to have primary union to take place in the incision.

Dr. McPhedran, referring to the treatment of simple ulcer, said that the treatment for this is one that is not carried out very effectively. If not successful after a month of rest in bed with medicinal treatment, he would advise operation.

Dr. J. F. W. Ross referred to a case of catarrh of the stomach in a woman of fifty-nine pounds, and where he was satisfied before operation that he had to deal with a cancer of the stomach. She recovered and rapidly gained in weight until she reached 140 pounds.

Dr. Bruce referred to a case upon which he had operated.

Drs. Rudolf, Anderson and Howitt replied.

Vaginal Section, Exploratory and Operative.

Dr. T. Shaw Webster read a paper with the above title describing several operations performed in that way, one being for ectopic gestation. He reported good success in them from the vaginal route.

Dr. Noble thought the vaginal route all right for abscesses, but had a preference for the abdominal in pelvic operations.

Drs. Bruce, Macdonald, Oldright, Ferguson (London), W. J.

Wilson and Clouse discussed this paper, the discussion proving an interesting one.

Dr. Webster replied and defended his position ably.

Dr. Bruce L. Riordan now passed through the theatre announcing that luncheon was now ready in the dining-car, so there was an immediate bolt for the door, and all were soon enjoying themselves at a very fine spread provided by the Committee on Arrangements. Afterwards, bright and happy speeches were made by several of the members, the audience simply calling for their favorites, and no one being specially set down for any toasts. Amongst others who said some good things were Drs. Harrison, Dean Geikie, J. C. Mitchell, N. A. Powell, George Bingham and the President.

SECOND DAY—AFTERNOON SESSION.

The Roentgen Rays in the Diagnosis of Urinary and Biliary Calculi.

This paper, X-ray photos and specimens of calculi, which proved a very interesting demonstration, was presented by Dr. S. Cummings, of Hamilton.

Dr. McGillivray, Toronto, asked if the diagnosis is always positive.

Dr. Cummings replied that if any errors, they are due to operator, not to X-ray itself.

There was a demonstration of skiagrams in an adjoining room.

Preliminary Report on the Relations of Hyperchlorhydria to "Bilious Attacks," Some Forms of Eczema, Gout and Muscular Rheumatism.

Dr. Graham Chambers, Toronto, stated that on several occasions he had examined the gastric contents of patients of apparently normal digestion and found hydrochloric superacidity, although in some of them there was a history of "bilious attacks," which were probably attacks of hyperacidity. He considers that the gastric distress, which is present in these cases, is more or less due to the hyperesthesia of the mucous membrane of the stomach, as well as to the excessive acid contents. The commingling of these two neuroses, hyperchlorhydria and hyperesthesia gastrica, makes an investigation into the relations of the former to "bilious attacks," eczema, muscular rheumatism and gout a very definite one, but he cannot but think that a general irritable condition of the gastric nerves must produce some changes in the sympathetic and cerebro-spinal centres, which would no doubt lead, or tend to lead, to

disease in other organs. Dr. Chambers' attention was first called to this subject about two years ago, when he observed that the internal treatment, both dietetic and medicinal, which he was accustomed to give in cases of hyperchlorhydria, was approximately the same as that which he was using in some forms of acute eczema, and in both cases it gave very satisfactory results. In his experience "bilious attacks" are very frequent in cases of chronic hyperchlorhydria; he has also found that symptoms of indigestion are of frequent occurrence in eczema, and are usually of a character which indicates hyperchlorhydria. He has examined the gastric contents of six cases of eczema, with symptoms of dyspepsia, and in five of these there was an excess of HCl. in the gastric contents. He gave notes of cases in illustration of his researches. "Acidity" is a common symptom in gouty subjects, and Dr. Chambers believes that a thorough investigation of the subject would prove that the "acidity" of the gastric contents is not due to organic acid at all, but that hydrochloric acid will be found to play an important part in it. With regard to muscular rheumatism, we know very little about the etiology of it. Clinically, we have found that muscular rheumatism and gout are in some way related; and in regard to relations of hyperchlorhydria and muscular rheumatism, Dr. Chambers has observed that they are frequently associated, but whether the muscular rheumatism is the result of the hyperchlorhydria, he is at the present time unable to say.

Dr. Bryce discussed the paper.

Medical Treatment of Surgical Tuberculosis.

Dr. W. B. Thistle, Toronto, said: It is important to remember this fact, that there is no difference in the nature of the disease, whether considered surgically or medically, and especially is this so when we come to consider treatment. We hear on all sides that it is a curable disease, and complete cure often now happily results from medical treatment. Dr. Thistle has observed that tubercular cases requiring surgical treatment in the great majority receive little or no medical treatment. The subjects of surgical tuberculosis should have the fullest advantage of sunshine and fresh air as well as those suffering from the disease in its medical aspect.

Treatment of Post-operative Peritonitis.

By Dr. Walter McKeown, Toronto. The paper suggested that this condition should be treated by the use of decinormal salt solution, either subcutaneously or intravenously, and enemata of strong solutions of sulphate of magnesia. The toxins will dialyze; the antitoxins will not. If, then, the toxins can be

eliminated with sufficient rapidity, the disease will limit itself as a result of the formation of antitoxin together with the plugging of the peritoneal lymphatics. The blood is diluted by the addition of the salt solution, and this is drawn out into the rectum by means of a higher osmotic pressure carrying the toxins with it. He claims that even with a condition of paralysis of the bowel, toxins will dialyze in this way. He suggests that if a patient were placed in a salt bath, the toxins would probably osmose directly through the skin. That osmosis does not take place from without in through the skin, does not prove that the reverse process will not occur. Osmosis is known to take place much more rapidly in one direction through the shell membrane of the egg than the other.

SECOND DAY—EVENING SESSION.

Dr. R. A. Pyne, the First Vice-President, occupied the chair.

The Committee on Credentials recommended the following for membership, which was adopted: Dr. R. W. Garrett, Kingston; George Sherk, Cheapside; W. A. Scott, Courtright; Daniel Buchanan, Galt; L. C. Prevost, Ottawa; Milton Baker, Springfield; Donald McGillivray, Toronto; A. E. MacColl, Belleville; Arthur I. Brown, Holstein.

The following constituted the Nominating Committee: Drs. Geo. A. Bingham, A. McPhedran, Burt (of Paris), Powell (of Toronto), Mitchell (of Enniskillen), Harrison (of Selkirk), and Macdonald (of Toronto), Drs. E. Clouse and Price-Brown acting as scrutineers.

This committee reported as follows, which, on motion, was received and adopted:

President, Dr. N. A. Powell, Toronto; First Vice-President, R. Ferguson, London; Second Vice, R. W. Garrett, Kingston; Third, L. C. Prevost, Ottawa; Fourth, R. L. Turnbull, Goderich; General Secretary, Harold C. Parsons, Toronto; Assistant, George Elliott, Toronto; Treasurer, A. R. Gordon, Toronto.

The report of the Committee on Public Health was presented by Dr. Roseburgh, seconded by Dr. William Oldright, and adopted.

That on Tuberculosis, by Dr. W. B. Geikie, seconded by Dr. H. J. Hamilton, and adopted.

That on Hospital Abuse was presented by Dr. Webster, in the absence of the chairman, Dr. W. J. Wilson, seconded by Dr. W. A. Young, and adopted.

The Committee on Inter-Provincial Registration had nothing at the present time to report.

Treasurer's report was presented by Dr. G. H. Carveth, and showed last year's receipts to have been \$376.30, and expendi-

tures \$340.66, leaving a balance of cash in bank of \$35.64. This was audited by Dr. R. D. Rudolf, and, on motion, adopted.

The report on Necrology was presented by Dr. George Bingham. It included the names of C. W. Covernton, Toronto; C. E. Martin, Toronto; J. D. Macdonald, a Past President, Hamilton; J. E. Eakins, Belleville; Isaac Ryall, Hamilton; A. K. Sturgeon, Petrolia; Dixon, Pembroke; Mennie, Toronto; J. A. Watson, Toronto; T. H. Little, Toronto; Jonathan Robinson, Toronto; J. H. Parsons, Toronto, and Irving, St. Mary's.

The Ontario Medical Library was voted \$50, on motion by Dr. R. A. Reeve, seconded by Dr. H. T. Machell.

A notice of motion was given by Dr. Graham Chambers, and seconded by Dr. H. B. Anderson, that the business session at future meetings be held on the evening of the first day. This will be referred to the Committee on By-laws.

Resolutions of regret *re* non-payment of the annual \$2.00 fee of the Ontario Medical Council was introduced by Dr. Ferguson, of London, seconded by Dr. Gibson, of Belleville, that some members of the profession in the province had refused payment of this annual fee. This Association regards the imposition of this fee as most reasonable, payment of which should meet with a cheerful response on the part of every member of the profession. This was carried unanimously, amid much applause and without a dissenting voice.

Dr. Wishart, Toronto, chairman of the Special Committee to draw up a resolution *re* vaccination.

Resolved, That the Ontario Medical Association desires hereby to re-assert the opinion of the medical profession of this province:

1st. That the principles of Jennerian vaccination against smallpox, which have been now attested by the experience of more than a century, are scientifically correct.

2nd. That in order to carry out the protection through vaccination against smallpox it is necessary that the lymph used in the operation be of normal quality, and that this can be shown only by a proper amount of systemic reaction to the vaccine, as determined by the character of the vesicles, and that the absence of a normal reaction, as shown by the presence of vesicles, is no positive evidence of the immunity of the person either against vaccinia or smallpox.

3rd. That this Association emphasizes the urgent necessity that the sacrifice of the skin be sufficiently extensive to secure such reaction, and to this end recommend that from three to five insertions, each of a quarter of an inch square, be made in each vaccination. This was carried.

Medical Defence Union.—On motion of Dr. J. F. W. Ross, seconded by Dr. A. Primrose, a committee was appointed to

inquire into this matter, to report at the next meeting of the Association in 1902.

Votes of thanks were passed to the Minister of Education for the use of the building, and also to the President, Dr. McKinnon, for his exceedingly able address.

During the progress of the meeting it was addressed by the Honorable the Minister of Education, Mr. Harcourt, who advised them strongly to keep up the standards of matriculation and the professional examinations.

Dr. N. A. Powell was then installed in the office of President, and, after brief acknowledgement, the 1901 meeting adjourned.

THE EXHIBITS.

The members of the Association were also treated to a very interesting exhibit by many of the wholesale pharmaceutical houses and book-dealers. The only firm of instrument makers exhibiting was the Hartz Co., who showed a very beautiful and complete static machine, made by the H. P. Engln Co., of Cleveland. The plates of this machine are of glass and micanite. The afternoon we saw it working was a very damp day, yet the spark was almost equal to the working of the machine on the succeeding night, when the atmosphere was exceedingly dry. They also exhibited in connection with the static machine a very fine X-ray tube, which gave a very clear definition. We cannot speak too highly of this machine. The S. B. Chandler Co. had on exhibition a globe nebulizer, and also a large number of medical works. They have recently added a publishing department to their already extensive establishment, and it has been placed in the charge of Mr. Watt, who for so long a time has been connected with the Medical Publishing business of Toronto. Carveth & Co., who make a specialty of medical works, also had a very large exhibit from the leading publishers. The well and favorably known house, Parke, Davis & Co., of Detroit and Walkerville, confined their exhibit to a few specialties. They had a very full sample line of their serums, antitoxine and vaccine. These quite made up by quality for the usual quantity. Mercurool, the new preparation of mercury, introduced by this well established firm, has been receiving a double amount of attention, both as an injection in gonorrhea and also as an internal remedy for syphilis. It has been used also subcutaneously under the skin, and the reports are exceedingly flattering as to its efficiency. They also presented Adrenalin, the blood-pressure-raising principle of the suprarenal gland. This remedy has evidently come to stay, and from the researches that have been so ably carried out by most distinguished men, there is no question whatever that this

solution is a very great hemostatic. While it is at present principally used in nasal surgery, its field of usefulness appears to be spreading to general surgery.

The well established firm of Frederick Stearn & Co., of Detroit and Windsor, Ont., also confined their exhibit to two or three of their special productions. The Vibutero, a new preparation of this firm, combining the properties of the two Viburnums with Palmetto and Pulsatilla and other sedative and anti-spasmodics. This preparation bids fair to meet with very great success with the profession. They also showed a new diphtheritic antitoxin syringe; it is an exceedingly unique affair, it is cheap and perfectly aseptic. The parts of it are so arranged that the serum can be injected through the original container, which renders the injection thoroughly aseptic. A new syringe is used in each case. For the first time this firm introduced antitoxin to the Canadian profession. It has met with great success in the United States and will undoubtedly be well received here. They showed many of the bacteria under the microscope, and supply slides of these to the profession.

R. L. Gibson, the Canadian representative of the Palisade Manufactory Co., showed their hemaboloid plain and hemaboloid arseniated. These preparations give a very fine tonic effect in cases where now in other forms quite disagree with the stomach. Phosphogon, a new preparation by which the phosphorus is administered in a most easily assimilated form.

Messrs. Henry K. Wampole & Co., of Philadelphia, and whose Canadian laboratory is located at Nos. 36 and 38 Lombard St., Toronto, made a most extensive display. The name of "Wampole" is famous both among the medical profession and laity, as a result of the almost universal use of their Tasteless Preparation of the Extract of Cod Liver Oil, which during the past eighteen years has been introduced and exploited only through the medical and pharmaceutical professions. In addition to this preparation, Messrs. Wampole & Co. are now calling particular attention to their Milk Food, Antiseptic Vaginal Cones of Boroglyceride Compound with Ichthyol, and Haemogen.

Their Milk Food is shown to simulate more accurately and uniformly human milk than any other similar food. Briefly stated, chemically it is simply pure milk, largely deprived of its casein, partially predigested by the diastase of the malt, and its nutritive principles enhanced by the beef, and the extra percentage of soluble phosphates obtained from the inner cortical of the whole wheat grain.

As regards the Antiseptic Vaginal Cones of Boroglyceride Compound with Ichthyol, these are most appropriate for those diseases in which their use is indicated, offering an acceptable method for the treatment of vaginal ailments without incon-

venience, pain, or discomfort, and without necessary exposure unavoidable in the introduction of tampon or other local applications, giving prolonged contact of very efficient antiseptic and mild astringents, besides the medical activity of the Ichthyol.

Wampole's Haemogen is an organic combination of Iron and Manganese with Beef Peptone, and will be found of especial value in the treatment of those diseases where their origin is traceable to an impoverished condition of the blood, or where the administration of an iron tonic would be indicated.

LONDON MEDICAL ASSOCIATION.

At the May meeting, after the presentation of a number of pathological specimens, and a discussion thereon, the Rev. C. S. Eby, Secretary-Organizer of the Anti-Consumption League of Ontario, addressed the members on the steps that are being taken to erect sanatoria for consumptives throughout the province.

On Tuesday evening, the 14th inst., an enthusiastic public meeting was held, which was addressed by Mayor Rumball, Rev. Dr. Eby, Drs. Cl. T. Campbell, Niven, and English.

On Monday evening, the 20th inst., at Strathroy, Rev. Dr. Eby addressed another large and interested gathering on the sanatorium question, and on Wednesday evening, the 22nd inst., another successful meeting was held.

It is the intention of the local association that a by-law be submitted to the ratepayers at the December elections for the erection of a sanatorium jointly by the City of London and County of Middlesex.

W. W. ENGLISH,
Secretary.

Editorials.

GONORRHEAL RHEUMATISM.

The subject of urethral arthritis is an important one. The term gonorrheal rheumatism limits the etiology too closely to one germ. There are several germ sepses of the genito-urinary tract that may cause the arthritis. The arthritis may follow septic inflammation of the vagino-uterine canal.

The gonococcus is the cause of gonorrheal arthritis. But once the inflammation has been set up the urethra, or vagina, is soon invaded by other pus-producing organisms. This accounts for the fact that, in the inflamed joints and lymphatic channels, there are several germs, as a rule, namely, the gonococcus, the streptococcus and the staphylococcus. The system may become infected through the mucous membrane by the active power of the living germ to penetrate it. Generally, however, there is some abrasion, caused by syringes or other instruments, through which the infection finds its entry into the general circulation. Though gonorrheal rheumatism resembles acute rheumatism in clinical features, there are good reasons for placing it with the pyemic or septicemic conditions.

Urethral arthritis occurs more frequently in males than females. This is likely due to the fact that the urethra is shorter and wider in women than men; but more especially to the fact that gonorrhea in women affects the vagina, the urethra escaping. Previous attacks of gonorrheal arthritis, exposure to cold, former acute rheumatism, the existence of gout, are considered as predisposing to attacks. The same joints are usually invaded in second attacks. The fibrous tissue suffer most, as ligaments, tendons, nerve-sheaths, fascia, pericardium, etc. Frequently it attacks only one joint, and does not tend to clear up in the affected joint first, if a second joint is invaded. It is more persistent than ordinary acute rheumatism. The knee, ankle, wrist, hip, shoulder and elbow are most frequently affected.

There are all the appearances of acute suppuration, heat, swelling, pain and redness. Suppuration, however, is very rare, notwithstanding this cellulitis. The sheaths of the tendons

around the joint are involved, and movements very painful or impossible. Sometimes the synovial membrane is inflamed when there may be more or less fluid in the joint. There is a marked tendency to ankylosis in the joint. This is due to adhesions and contractions in the tendons, sheaths, fascia and ligaments. In some cases the main feature of the case is a large accumulation of fluid in the joint; in others, the attack is most marked by pain of a very persistent character and considerable liability to deformity. This is a rare form of the disease, but very chronic.

In the treatment of these cases, it is of the utmost importance to disinfect the urethra. It cannot be expected that the joint symptoms will at once subside, but there is generally great improvement as soon as the urethra receives proper treatment. For this purpose boric acid, perchloride of mercury or chloride of zinc may be employed. A good injection is zinc chloride, gr. $\frac{1}{4}$; bismuth subnit., gr. xx; aqua, dram 2; four or five times every twenty-four hours. Protargol in the strength of half a grain to the ounce is useful. Salicin, salol and their allies are not of much value, either to cure the disease or relieve the pain. Quinine and potassium iodide have yielded the best results. Serum therapy is spoken well of by some. In cases where streptococci are present it might prove serviceable. Fixation of the inflamed joint is called for. The application of glycerine and belladonna is useful for the relief of the pain. Massage and passive motion are indicated in the management of the swelling and stiffness that remain so often after the acute stage subsides.

FUNCTIONAL PARALYSIS.

Down through the centuries there have been a class of cases that have been the wonder of the ignorant and the prey of the designing. These cases of loss of the power of locomotion, of sensation, of speech, of sight, or of hearing, and that have made recoveries, often quite suddenly, after some quite ineffectual chant was sung, or prayer said, or nostrum administered, or movement performed, have been the foundation for all sorts of claims to supernatural intervention, or miracle working on the part of the agent or curer.

Paralysis, of a purely functional type, may affect the motor or sensory side of our nervous system, or both. It may come on suddenly and pass off soon, or last long and end as it began, in the twinkling of an eye. It may be local or general, or very mixed in type, and entirely unlike any recognized form of organic disease of the nervous system.

In an instant blindness may come upon a person, and, after lasting for a time, disappear, leaving the vision unimpaired. Hearing may be lost and regained in like manner. Here we have blindness and deafness of such a type as to be amenable to the tricks of the trickster; and yet the recoveries be recorded as so many miracles. For thirty years a person was known to be bed-ridden, and yet without the stigmata of organic disease. All of a sudden a certain event happened in the home, and the person, seized with an irresistible impatience to see what was going on, got up and walked.

Changes in the action of the nerve control of some of the muscles of the body and we have a phantom tumor. Sudden loss of control over the stomach and diaphragm, and the person is distended with flatulence and feels as if going to die of pressure and fulness. A volatile stimulant, some sweet smelling carminative in the form of valerian or assafetida, and they are relieved. The consoling word of a shrewd fakir may do as much.

So there may be pains in the joints or viscera, there may be derangements of function, as vomiting or diuresis or diaphoresis, and no change in any portion of the nervous system to explain such phenomena. The fingers may be numb, or the cheeks may be burning subjectively, or the heart may feel as if it was going to act after the manner of the grandfather's clock.

These are the cases on which the thaumaturgist has made his reputation in all ages. The miracle monger there has always been, and, so long as human nature remains what it is, he will always play an important role in the ignorant and superstitious mind.

The world has witnessed its outburst of dancing mania, epidemic chorea, tarantulism, vision seeing, transition and so on. There is some abnormal psychological condition founded, it may be, on some strong belief. But it is highly improper, indeed absolutely wrong, to try to cure these cases by methods

that are founded on error, and often on actual fraud. One error should not be supplanted by another. Cure should be sought by natural and rational means, by improving the general health by good counsel and management, and wise encouragement.

INTEMPERANCE AND HEREDITY.

At the Brooklyn meeting of the American Association for the Study and Cure of Inebriety, held in 1888, a committee was appointed to study and report upon the heredity of inebriety. Dr. T. D. Crothers was chosen as chairman of the committee. After thirteen years investigation, the committee makes an advance and partial report.

The report deals with the histories of 1,744 cases of inebriety. Great care was taken in all cases to verify the facts. These studies have included every condition or circumstance which might be regarded as entering into the development of inebriety. It was found in the study of these cases that great care was required, as many evaded or concealed the facts about their parents or grandparents, having drank to excess.

The heredity of intemperance is established beyond doubt by the histories of the cases given. The heredity may pass over a generation, and the intemperate habits break out with marked activity in a second or third generation. The injury caused by the use of alcohol to the cells and tissues of the nervous system, is bound to be transmitted in some form or other. It may not always be in the drink or narcotic drug habit, but in the form of some of the neuroses. There may be a combination of the drink or drug habits with some neurotic condition, as epilepsy, hysteria or insanity.

Of the 1,744 cases of inebriety reported, 1,080 cases were clearly of a hereditary nature; 390 cases of drunkenness were due to disease, injury, shock, strain and worry; 180 cases were traced to lack of food and poisoning from some trade or occupation; and eighty-five cases were due to bad surroundings, exposure, ignorance and contagion of the habit from others. In nine cases no assignable cause could be traced.

In the first and largest group there was mental instability and want of control. There would often be a period of psychical

pain and unrest which found relief in the use of spirits. The characteristics of the parents or grandparents reappeared in the descendants with remarkable similarity, beginning to drink at the same age and under the same conditions. In many instances at a certain age the drink habit disappeared and would be replaced by distinct religious emotions. This change generally came about the age of 30 to 40. It must also be borne in mind that many of the children of parents who drink are weakly, and are allowed stimulants early in life to act as a restorative. The tendency for the drinking habits to break out at the same age as in the cases of the ancestors, is quite noteworthy.

There are a certain number of the descendants of drinkers who do not take to intemperate habits, but show some distinct psychopathic state. They are often enthusiastic temperance workers, emotional preachers, excitable politicians, or act as persons on the border line of insanity. The children of such parents may revert to the drug and drink habits of an earlier generation. Criminals, tramps, and the mentally submerged usually belong to this class.

There are a certain number of the descendants of intemperate parents where the outbursts take on the epileptic characteristics. Like a bolt from the clear sky they become intemperate. There is a strong tendency to assume the cyclone and periodic features. The women descendants of such parents become drug neurotics, suffer from all sorts of ailments, and resort to faith curers and such like for relief. Some of these persons may show great sexual perversion, or may become gourmands. Again, there may be instances of remarkable endurance, the persons performing almost impossible tasks.

NOTES BY THE WAY.

Home again, after an absence of ten weeks! While I am glad, for many reasons, to be here, I must admit that I would like to have made a longer stay in certain cities I have visited. A few notes as to what I have seen and heard! I was much interested while in New York in examining some of the modern aids to teaching in obstetrics, of which we have heard much during the last few years. Clifton Edgar, of the University of the City of New York, and Robert Dickinson, of the Long Island College Hospital, appear to be doing excellent work in this direction. Edgar's life-size manikin, which has been used by Temple, of Toronto, and Moorhouse, of London, for some years, is still the favorite in New York; and, on the whole, I don't know that I have seen anything that is much better. I still, however, have a fondness for the French manikin, almost an exact copy of the original German model, which I have used during the last fourteen years. I will not now attempt to describe the great variety of models, wet and dry preparations, bony and metallic pelves, etc., which the obstetrical teachers of New York use, particularly as many of them are like those we use in Canada; but I desire to express my extreme satisfaction at the great advances that have been made during the last few years in the various colleges of that city. Fifteen years ago no single school of New York required its students even to witness a case of confinement before graduating. In those days they were far behind us in Canada, as far as their methods and requirements in obstetrics were concerned. Now, however, the New Yorkers are forging ahead, and it becomes our duty as Canadians to see to it that we do not go behind. I don't mean to say, at the time of writing, that I have any pronounced fear about our position, but the assumption of a little humility will do us no harm. I can't help thinking that we have our ebbs and flows in Canada as elsewhere. I think I know one medical college that suddenly became weak almost during the day of its greatest strength. With reference to the improved condition of things obstetrical in New York (which is not, however, confined to that city), I think it only fair to say that much credit for the same is due to the late Theophilus Parvin, of Philadelphia, and Clifton Edgar, of New York. Without going into any special details, I may say that I know of no obstetricians in the world who have a better conception of the various injuries which may occur to the pelvic floor (not the perineum) during labor, and of the proper methods of repairing the same, than those of New York. In conclusion, as to this city, I have to say, with much regret, that many of the models and preparations which have been described in the medical journals, and to

which I have already referred, are so rough and crude as to be quite disappointing. Either the teachers are too busy to properly explain their ideas to the instrument makers, or the latter are too careless in carrying out the instructions they receive. The finished style and the completeness which one finds in colleges and manufacturers' establishments of Paris is in striking contrast with some of the almost slovenly and uncleanly things which one sees in like places in New York.

Wm. Caven, John Fotheringham and I left New York on the good steamship "Minneapolis," April 20th, and, after a very pleasant passage, reached London, April 29th. Dear old London—how glad I was to see it once more—after twenty-four years. They told me I would find it much changed. Perhaps I did; but, if so, I didn't realize it to any extent. In fact, I scarcely saw the new things. The old things I can find only in London—the new things I can find much nearer home.

To commence with medical matters, I may say that I was somewhat surprised to find that no great advances had been made in the methods of obstetrical teaching during the last twenty-five years. The Londoners appear to view with something like contempt many of the manikins, models, and other appliances which are so commonly used in Germany, France, and America. Some of them freely express the opinion that persons using such artificial aids are "playing to the gallery." I fail to see how the expression is suitable; but I may say that if I at any time find the gallery filled with medical students, I am quite willing to "play" to it, to some extent, at least. Notwithstanding their modesty, however, they do use some artificial aids for demonstrating purposes; but I am not certain that they have anything newer than the Tower of London. I still think, at the same time, that they teach the science of obstetrics exceedingly well—I know of no place where they do it better; but I believe that they teach the art of obstetrics exceedingly ill—I know of no place where they do it worse. Some of them say the proper place to teach obstetrics is at the bedside. Quite right, but they don't do it there. Public opinion, unfortunately, will only permit them to indulge in such practical methods to a very limited extent. We will know what that sort of handicapping means in our fair city of Toronto.

I was very much pleased with what I saw in Queen Charlotte's Lying-in Hospital. It is about 150 years old, but its importance and pronounced success commenced about 90 years ago, when it came under Royal patronage. In 1809 His Royal Highness the Duke of Sussex became President for life, and Her Majesty Princess Charlotte became Patron. In 1850 Her Majesty Queen Victoria became Patron; in 1866 the Princess

of Wales became Vice-Patron. Now Her Majesty Queen Alexandra is Patron, and the Duchess of York is Vice-Patron.

In a general way their methods may be described as including a combination of asepsis and antiseptis, and call for no special comment. I was much interested in the completeness of their system of making routine examinations of their patients during pregnancy. The patients come at regular stated intervals to the out-door department for such examinations, which appear to be made with great care. Apart from the chance of finding a disproportion between the child and the pelvic cavity from any cause, they attach great importance to the discovery of breech presentations. Turning in such cases (generally during the eighth month) appears to have become quite a fad in London during the last few years. Without attempting to discuss the merits of such procedure, I will simply say that I think it quite right in certain cases. I would like to suggest, however, to the London, or more properly the English, teachers, that if they spent more time in demonstrating the proper methods of delivery in breech presentations, they would be doing greater service in the interests of the unborn, and would much reduce the mortality (now frightful) in breech deliveries in that country.

I was very anxious to get some definite knowledge as to the success of the "London Medical Graduates College and Polyclinic" (why did they burden it with such an awful name?), and naturally expected to learn a good deal about it from some of our Canadian graduates, of whom there are about twenty-five in London. Strange to say, I couldn't find one who appeared to know much about it, nor one who was attending it. Two had evidently made a big effort to attend it faithfully, but had given up the attempt, and were irreverent enough to say that it was "no good." Yet I learned from English sources that it is the cheapest thing of the sort in London, is rendered eminently respectable by such men as Sir Wm. Broadbent, Mr. Jonathan Hutchison, and others, is lauded and encouraged by such men as the leader of the House of Commons, and other celebrities, and is patronized by a fairly large number of English graduates. I understand the course consists of one out-door clinic a day, a lecture on some special subject twice a week, and a clinical lecture once a fortnight. I wonder how it would do to shorten the title and extend the "menoo" a bit? I have a great respect for English physicians and surgeons, but I can't help thinking that in some respects they are terribly slow and positively stupid. For many long years the world was saying that London should do more in the way of utilizing its magnificent clinical material. The poor, drowsy old city at last awakened, put on new vigor, and after years of toil, and

almost an un-English amount of advertising, has only managed to bring into existence this poor, miserable, beggarly little Polyclinic.

Caven and I left London and Fotheringham, May 15th, and reached Paris the same evening. I found here that the teachers, compared with those of London, go to the other extreme, and even during their didactic lectures employ an almost bewildering variety of charts, models, preparations, phantoms, manikins, etc. A visit to Tramond's shop near the University Medical College was a revelation to me. I never before had seen anything like such a variety of obstetrical wax models and pelves of all sorts. I also paid a couple of visits to the shop of the celebrated instrument maker, Matthieu, where I saw much that greatly interested me. As I have before intimated, his latest manikin pleased me more than any I had previously seen.

The system of teaching, so far as I could learn its character, appears to me to be admirable in many respects. The students have to take a regular course of instruction and then pass a rigid examination before they are admitted to the clinics, where they take a practical course (acting as assistants) for three months, during about half of which they are internes. During these three months they do no work outside of obstetrics. The chances for graduates (home or foreign) are not so good; but there are certain private courses which they may take, and in which they can do various kinds of practical work under competent guidance on payment of about four dollars an hour.

Pinard and Budin—in fact all, or nearly all, Parisian obstetricians still use the Tarnier forceps, and as a general rule adhere to the French custom of applying the blades in the transverse diameter of the head. Some, however, make certain exceptions to this rule, as, for instance, in cases where the head lies transversely across the pelvic inlet, when they apply the forceps in the oblique diameter (see Ratchinsky's paper, "Obstetrics," October, 1900). In examining for the fetal heart-sounds they use a special stethoscope with a broad bell, which, when pressing on the abdomen, pushes away the liquor amnii, thus rendering the sounds more distinct. They use quite freely the anti-streptococcus and anti-staphylococcus serum in actual or suspected septicemia; and some go so far as to use it as a prophylactic in women who have been examined after the rupture of the membranes before admission to the lying-in rooms. While we were in Paris there was an epidemic of diphtheria, and a proclamation was issued by the Mayor urging physicians to use anti-diphtheritic serum in all suspected cases.

After leaving Paris we went to Switzerland, where we spent a week very pleasantly. We enjoyed our stay of four days in beautiful, quiet, restful Lucerne. I can now fully understand

why English and English-speaking people love Switzerland, but I will not undertake to explain why. I would, however, advise those who wish to visit that charming country to go during the latter part of May or early in June, when they will see things at their best before the usual summer rush. After a couple of days in Zurich we went through the Black Forest to Bingen; thence down the Rhine to Cologne; thence to Brussels, Antwerp and Rotterdam; thence to London by way of Harwich.

When we returned to London we found Fotheringham still at work. Dwyer had started for home. Orr had arrived. Spence had returned from some country town, where he had been doing *locum tenens* work. He expected to go to Paris some time in June. Badgerow was hard at work, and expected he would stay in London for some time longer. Clingan was spending a good portion of his time at Chelsea, working under Bland, Sutton and Giles. Perry Goldsmith was working hard at his specialty, and had the good fortune to secure the warm friendship of Dundas Grant, who will shortly publish a work on "Diseases of the Ear, Nose and Throat." Hackney, Boyd, Young, Bell, Jones, Graham and Beatty were all hard at work. I found that quite a number of Canadians were spending their time mostly at University College. We were exceedingly glad to see so many of "the boys," and to find them all doing well. I had occasion to meet some of the London doctors, and was treated with very great kindness, especially by Wharton Hood, Dundas Grant and Easton. I was pleased to learn that Hood was likely to publish a second book in the near future. In it he will describe his methods of treating stiff joints, and will probably have something to say about the "bone-setters" of England, whose violent "smash-ups" have now happily become obsolete. On a certain occasion I was anesthetized, and I was surprised to find that Easton, the anesthetist, was married to a daughter of our old friend, W. H. Howland, whose death some years ago we so much deplored. Her relatives are still in evidence in Toronto, her uncle being our present mayor, and her brother one of our T. G. Hospital internes during the past year. Caven and I had the pleasure of spending a very pleasant evening with Dr. and Mrs. Easton at Dr. Hood's house.

Of course we heard a great deal about the South African war, and learned much about the warm feeling which the ordinary Englishman has to-day for Canadians. I think there is no doubt that England has learned many lessons from that war, and that she has become in consequence, more democratic (for which, in a general way, I am sorry). I heard of the occurrence of many rather amusing episodes in connection with this same war. A student of the London University told me of one. We

have heard much in Canada about the delirium which seized London when news of the relief of Mafeking arrived. On that evening the students of London University marched in a body through the streets. At their head were most of their Professors, including Lord Kelvin, Sir Norman Lockyer, Professor Perry and others. Lockyer, probably the oldest of the Professors, well known as the Astronomer Royal of England, took the leading part. At every opportunity, especially in passing a monument, he would climb as high as possible and address the students, making patriotic remarks, and at the same time begging them to be orderly and quiet. Then off they would start again—the orator waving a Union Jack and making more noise than any of the students. One of the results of the war has been the establishment of numerous rifle clubs throughout England. Dr. Conan Doyle has organized one of these. In an interview with Captain Trevor (see *Strand Magazine* for July). He says “the men of the club are drawn from all classes, and things are run on democratic lines. We have a Professor of Oxford side by side with a cabman or a mason in his corduroys. At a boxing day competition a publican and a non-conformist clergyman were shooting off their finals at the last range. The publican won.” I’m not sure that we will ever have exactly that sort of thing in Canada, but I can easily fancy that it would be very interesting to see—for instance—Lem Felcher and the Rev. Dr. Potts shooting off their finals at the Mimico ranges.

Some of my friends will be interested in hearing that we saw some good cricket in London. I don’t know that it is generally understood that Bill Caven is a regular sport, and dearly loves to watch a good game. John Fotheringham, on the other hand, is sadly deficient as to his knowledge of cricket; so Bill and I left John doing diseases of the nervous system, while we did the noble game. We were delighted to see our old friend, Dr. W. G. Grace, in good form. As usual, he always goes in first, and the appearance of the big, clumsy-looking giant is always the signal for a rousing English cheer. When he commences to bat you cease to see anything clumsy. They call him the old man now, and it is rather sad to think that as an active cricketer he can’t last much longer. We also saw Prince Ranjitsinhji, who still plays in his own inimitable style, but was unable to put in an appearance during the month of May on account of illness. Huge scoring is still in evidence, and much fine bowling is done, but poor fielding is not uncommon. The number of missed catches during the early part of the season was deplorably large. One might think from the tone of the British press that fielding is a lost art in England; but if he got a chance to see Yorkshire in the field, he would discover

that such is not the case. However, I may say that this same Yorkshire excels in three rather important points, *i.e.*, fielding, bowling, and batting. We saw the match between Yorkshire and Middlesex at Lords, which drew an attendance of from eight to ten thousand on each of the three days. Yorkshire, however, won easily, with eight (I think) wickets to spare. We saw the match between South Africa and M.C.C., which was a fairly close one. The S.A. team fielded well, bowled fairly well, but were rather weak at the bat. We saw Jessop twice. He is the most dashing, and the most popular bat in England. They tell rather a good story in connection with a match between Authors and Artists. Conan Doyle was bowling, and one of the Artists got out, first ball. To the spectators it seemed easy enough, and a friend asked the unlucky Artist, "What was the matter with that ball?" He replied, "I don't know. I didn't see it." "Why, how's that?" he was asked. He then got rather indignant, and said, "See here, how could you expect a fellow to play against a great big beggar like that, with a pink shirt and an olive-green background?"

When one comes back after a trip abroad, he is apt to think of the condition of things at home. My general feeling in reference to things medical in Canada is one of satisfaction. I have an opinion—perhaps more pronounced than ever before—that the rank and file of our profession in this country will compare favorably with physicians in any part of the world. As to our own city of Toronto, I should not, perhaps, say much, especially as some outsiders, not uncharitably disposed, think we have a fair share of vanity and conceit. These, however, are not very bad commodities, and I only hope we will never have any worse characteristics. I hope I may be pardoned when I say that I feel proud of the physicians and surgeons of this city, and believe that, all things considered, they are the best Toronto has ever known. We have been talking for some years about post-graduate courses. We have plenty of teaching ability, and a fair amount of clinical material at our disposal. How would it do to stop talking, and go to work?

A. H. WRIGHT.

TORONTO, July 1st, 1901.

ONTARIO MEDICAL COUNCIL.

TORONTO, June 11th, 1901.

The Medical Council met this day, and all the members present excepting Dr. Henry, who shortly after took his seat. The usual routine of business was gone through with, the retiring President, Dr. Britton, delivering his annual address, which was very interesting, he having paid very close attention to the working of the Act throughout the year, and made the statement regarding the annual fee that 1825 members of the College had paid all arrears up to that time. We learn now, however, that up to date 1940 have paid up all arrears. The Doctor, in his annual statement, called the attention of the members of the College throughout the province to the fact that the protection given the profession was owing to the Medical Act itself being in existence and in practical working order, and that if it were not for that, medical men throughout the province would have from one thousand to one thousand two hundred more men to compete with than they have at the present time, as the applications for information as to what it is necessary to do to qualify in the Province of Ontario are received in great numbers throughout the year, so that the very fact of prosecutions of quacks throughout the province is not the only protection that the practitioners are afforded under the Act.

The proceedings of the Council were marked with more harmony than any previous meeting for some years, and the work of the committee was completed at an early date. Dr. Roddick addressed the Council at some length on "Interprovincial and Dominion Registration," and conferred with the committee of the Council on the subject. The report of the committee to the Council endorsed the general principles of Dr. Roddick's Act, but there are many portions of minor detail which will take some time to work out. The general feeling of the Council was much in favor of the Dominion Act, with a view of trying to create a wider field for the practise of medicine.

Dr. Brock and Dr. Emory, the President and Vice-President of the Council, respectively, for this year, gave very great satisfaction in their work, and all the old officers of the Council were reappointed, with the exception that Mr. Christopher Robinson, K.C., takes the late B. B. Osler's place, and Dr. J. C. Patton becomes auditor in the stead of Dr. Carlyle, deceased. The Council adjourned on Saturday, the 15th, after pretty constant work for five days.

The candidates who served their country in South Africa were granted the examinations they had thus missed by being away, the Medical Council following out the spirit of the other

licensed institutions in Canada by granting these requests. There are little or no changes in the curriculum of the College for the ensuing year, it remaining much as last year. Also the Board of Examiners remains the same, with the exception of two, who have been replaced by other members, as they had served a long time on the Board, and the Council seem to desire to adhere to an unwritten law that three years should be the limit of service on the Board of Examiners. This has not been carried out to the letter, but it is the intention to comply with the idea as nearly as possible for the future.

We also find that the number of practitioners in the province now are looked upon to be about 2,200 who are in active practise. This is somewhat of a falling off in the medical population, but is borne out by the canvassers of some of the medical directories who have been travelling through Canada this last summer.

It is announced that the dates of the next meeting of the Mississippi Valley Medical Association have been changed from the 10th, 11th, and 12th of September to the 12th, 13th, and 14th of September. This change has been made necessary because the dates first selected conflicted with another large Association meeting at the same place.

The meeting is to be held at the Hotel Victory, Put-in-Bay Island, Lake Erie, O., and the low rate of one cent a mile for the round trip will be in effect for the meeting. Tickets will be on sale as late as September 12th, good returning without extension until September 15th. By depositing tickets with the joint agents at Cleveland, and paying 50 cents, the date can be extended until October 8th. This gives members an opportunity of visiting the Pan-American Exposition at Buffalo, to which very low rates by rail and water will be in effect from Cleveland.

Full information as to rates can be obtained by addressing the Secretary, Dr. Henry E. Tulley, No. 111 West Kentucky Street, Louisville, Ky. Members of the profession are cordially invited to attend this meeting.

Those desiring to read papers should notify the Secretary at an early date.

Personals.

Dr. G. S. Burt, of Severn Bridge, Muskoka, went to Scotland early in June.

Dr. A. McPhedran, of Toronto, is going to Europe for a two months' holiday.

Dr. John T. Fotheringham, of Toronto, sailed from London for New York, July 6th.

Dr. Geo. A. Bingham, of Toronto, has gone to England, where he will remain for some weeks.

Drs. A. H. Wright and W. P. Caven have returned from Europe, and resumed their practice July 1st.

Dr. George Clingan has returned to his home in Manitoba. On his journey from England, he remained a few days in Toronto.

Dr. Robert J. Dwyer has returned to Toronto after spending a year at post-graduate work in the hospitals of Great Britain and Germany.

Dr. B. E. Hawke, of Stratford, has removed to this city and has located at 31 Carlton Street. He will confine his practice to diseases of children.

Dr. William Lewis Yeomans (Toronto University), of Bucyrus, Ohio, was married, June 18th, to Miss Selina B. Morison, of Chicago. Congratulations.

Dr. D. W. Montgomery, Professor of Dermatology, California University, spent a fortnight in Toronto last month, visiting his family and many friends.

Dr. A. H. Perfect, of Toronto Junction, and Dr. S. M. Hay, of Toronto, returned to their respective homes, July 1st, after visiting Johns Hopkins Hospital, Baltimore.

Dr. A. T. Stanton, one of the resident physicians of the Toronto General Hospital last year, has been appointed surgeon to the C.P.R. steamer "Empress of China."

Dr. MacLennan, a graduate of Queen's University, Kingston, who has been working in London, England, during the last ten years, has come to Toronto to practice his specialty, diseases of the eye, ear, throat and nose.

Dr. Crawford Scadding has returned to his home in Toronto after spending a couple of months in England.

Dr. Arthur W. Mayburry, 253 Spadina Avenue, who has recently returned to town will in future confine his attention to the diseases of the nose, throat, heart and lungs.

Dr. Pickard (Victoria University), of Virginia City, Nevada, paid a brief visit to this city last month. His friends were delighted to see him looking so youthful and prosperous.

Drs. W. C. Barber and W. Thistle, of Toronto, and Dr. J. M. Forster, of Kingston, started on a cruise in a steam yacht, going down through the Bay of Quinte and up the Rideau Canal.

Dr. J. Algernon Temple has been at Lake Simcoe having a short holiday. Excepting a slight weakness in his right arm, he has quite recovered from the effects of his recent runaway accident.

Dr. Jas. F. W. Ross, of Toronto, went away for a ten days' cruise in the "Oriole," June 27th. He and his party spent the greater portion of their holiday in Henderson's Bay, south of Kingston.

Dr. W. J. Greig, of Toronto, left his home, July 8th, for a four weeks' trip. He expected to go by Chicago and Salt Lake City to San Francisco, thence to Victoria, and back to Toronto by the C.P.R.

Book Reviews.

A Text Book of Practical Medicine. By WILLIAM GILMAN THOMSON, M.D., Professor of Medicine in the Cornell University Medical College, New York; Physician to the Presbyterian and Bellevue Hospitals, New York. Lea Brothers & Co., New York and Philadelphia: 1900.

This new work on practical medicine is eminently a student's text book, and arranged with such system that the reader can with ease grasp the subject before him. The free use of bold type in appropriate places is no small aid to the student in reading to advantage.

Dr. Thomson's long years of experience as a teacher and writer have enabled him to present a work in which are blended personal clinical observations and a knowledge of medical literature. Treatment receives more consideration than is the rule. The author assumes that the reader has for his aim a knowledge of curative medicine and the character of the book is moulded by that assumption. There are seventy-nine engravings illustrating to a great extent cases in the practice of the writer of the book.

A Text Book of Gynecology. Edited by CHARLES A. L. REED, A.M., M.D., President of the American Medical Association, 1900-1901; Gynecologist and Clinical Lecturer on Surgical Diseases of Women at the Cincinnati Hospital; Fellow of the American Association of Obstetricians and Gynecologists; Fellow of the British Gynecological Society; Corresponding Member of the National Academy of Medicine Peru, etc. Illustrated by R. J. Hopkins. 900 pages, 16 mo.: 356 illustrations. D. Appleton & Co., New York: 1901.

In this work the material on certain subjects is contributed by more than one writer, the contributions being collaborated by the editor, so that in many important instances one has the advantage of the views of several persons given by themselves on the same subject. The list of contributors embraces the names of American, English, Scotch and Canadian practitioners. It is too long to be given in full. The Canadians who have taken part in the work are J. F. W. Ross, of Toronto, and Wyatt G. Johnston, of Montreal. The work is very comprehensive and at the end contains some chapters on diseases of the rectum and anus. We observe that there are still some writers who are unable to see the superiority of the clamp and cautery operation for hemorrhoids and speak of its being unsafe. We are glad to be able to support the view of the editor. We have seen a large series of clamp and cautery operations and not one fatal result.

Selections.

SURGICAL HINTS.

Never use peroxide of hydrogen in any sinus or cavity in which there is a possibility of insufficient drainage. Unless the peroxide has a perfectly free exit it may do harm by forcing septic matter into tissues hitherto uninfected.

When there is no retention of urine, and yet no instrument can be passed, it is sometimes well to pass a catheter as far as it will go, and then leave it in position for many hours. After some time it may be found to go through easily enough.

In children and young people complaining of pains about the joints or limbs, never be satisfied with anything but a searching examination. It will not do to lightly make a diagnosis of rheumatism, for both osteo-myelitis and certain malignant tumors may thereby be overlooked.

There is no more valuable improvement in surgery than the fast spreading employment of the vaginal route for much of our intra-pelvic work. Yet the surgeon unfamiliar with it should stick to suprapubic operations until actual work on the cadaver has given him familiarity with vaginal operations. These are easy to learn and perform, but the danger is great in unfamiliar hands.—*International Journal of Surgery*.

Test for a Trace of Albumin.

Praum (*Deut. Med. Woch.*) gives a neat method for determining the slightest trace of albumin in urine. He filters a few cubic centimeters of urine into a test-tube, then adds a few drops of the reagent (he uses a saturated solution of sulphosalicylic acid), and gently mixes them; then filters more urine into the test-tube, allowing the filtrate to run down the sides of the tube until there is a good layer above the mixture. In this way the slightest cloudiness in the under layer can be determined by comparison with the upper layer. Having both fluids in the same container affords a better method for comparison than any other means.—*Medical Age*.

Acute Formalin-Poisoning.

J. Kleuber (*Munch. Med. Woch.*) was recently called to a patient who had by mistake swallowed several ounces of commercial formalin. The man was unconscious, there was marked pallor and cold, clammy perspiration, the respirations were in-

creased, there were rales over the lungs, the temperature, pulse and the various reflexes were normal, and there was neither paralysis nor vomiting. The most prominent feature was the coma, it being impossible to arouse the patient. The next morning the patient awoke several times, but soon fell back into his somnolent condition and anuria set in. At last, toward evening, the coma disappeared, the patient acted as if intoxicated, had some headache, conjunctivitis and the buccal mucosa was reddened. The next morning he was restored to health. Throughout the illness formic acid could be detected in the urine.—*Med. News.*

The Employment of Heat as a Therapeutic and Diagnostic Measure.

Many pages have been written on the therapeutic value of the local application of dry heat or moist heat in the treatment of various painful and inflammatory processes. It is a familiar fact to many practitioners that soaking a sprained ankle in very hot water will often do much toward relieving the pain and allaying inflammation and swelling, and that the use of repeated very hot vaginal douches will often relieve pelvic pain due to congestion or spasm. So, too, irrigation of the external auditory canal with very hot water is not only a pain relieving, but a curative measure in cases of inflammation of the middle ear. The other external and internal uses of hot water are exceedingly numerous.

The object here, however, says the editor of the *Therapeutic Gazette*, is to call attention to a proposition recently advanced by Lewin, of Berlin. He claims that by the use of the local application of heat we can make a diagnosis as to whether an acute inflammatory process has gone on to suppuration—as, for example, in a case of appendicitis. He asserts that if pus has not yet formed, the application of heat will be a comfort to the patient; whereas, on the other hand, if pus is present, it will so increase and exacerbate the pain that a diagnosis of the presence of this material can be made with assurance. He states, as an example, that in cases of swelling of the knee, associated with rheumatism or otherwise, we not infrequently are able to give great relief if the knee is put at rest with a fixation splint, and heat is actively employed. If by any chance pus is present the pain is augmented and becomes intolerable. Lewin states that he has employed heat for this purpose in a sufficient number of cases to make him feel confident that he cannot be mistaken in regard to this point, and he cites ten cases of appendicitis in which the heat was applied for two hours by means of hot compresses, and without the use of internal pain relievers. Eight of these received this treatment with a good deal of relief,

but the remaining two showed marked increase in pain. Of the eight cases all went on to cure in the space of from five days to three weeks, while, on the contrary, the two which suffered an increase in pain after the application of heat required the administration of opium for the relief of pain, and both of them died.

The experience of Sphor, of Frankfort-on-the-Main, is also quoted. In fifteen cases of appendicitis, which had hot applications without internal treatment, very similar results were obtained. So, too, in three cases of perimetritis, two were relieved by the application of heat and recovery promptly took place; while in the third patient the pain was greatly increased, and later on a large quantity of pus was discharged by the vagina.

If further investigations show that this method of diagnosis is at all accurate, it is so simple in its application that it cannot fail to prove of value.—*The Dietetic and Hygienic Gazette*.

A Case of Pneumococcic Peritonitis—(Reported at the February Meeting of the Belgian Society.)

Mme. A. H., aged 29 years, was married in 1894. Personal and family history were both good. The present attack began suddenly fifteen days ago, without any premonitory symptoms. On rising from bed, the woman was seized with violent pains in the stomach and back, and an intense chill, followed by elevated temperature. This was accompanied by abundant vomiting, at first bilious, afterwards porraceous in character. There was also uterine hemorrhage, with a profuse and fetid diarrhea. After eight days, the urgent symptoms improved slightly, but swelling of the abdomen set in. The umbilicus was protruded, reddened, and inflamed. At the laparotomy, made two days after her admission to the hospital (December, 1900), there escaped from the belly a flood of greenish, creamy pus, with abundant false fibrinous membranes. The immense pocket forming the walls of the abscess, and comprising the pelvis and the abdominal cavity as far as the umbilicus, was covered with false membranes. Nowhere could we discover the starting point of the inflammation. The cavity was fully irrigated with the physiological solution, and perfectly cleansed. After opening Douglas' cul-de-sac, in order to draw the pus cavity from below, we closed the abdomen by a deeper and a superficial row of sutures. The microscopic examination of the pus revealed the presence of the encapsulated pneumococcus of Frankel. A culture of this on gelatine was negative. On the contrary, the injection of the pus behind the ear of a strong rabbit brought on an acute septicemia, and the death of the animal in twenty-four hours.

During the first few days after the laparotomy there was a marked improvement of the symptoms. The temperature fell; the pulse became better; the strength and the general condition were perceptibly re-established. Beginning on the second day, the abdominal cavity was irrigated daily through the opening in the Douglas' cul-de-sac. At this time examination of the chest revealed the existence of a double bronco-pneumonia. On the tenth day, a profuse diarrhea again set in, and the condition of the patient became notably worse. During the night the abdominal wound opened at its upper end, and there flowed from it abundant blackish fecal matter. From this time the patient's symptoms were rapidly aggravated; delirium and want of appetite appeared; the temperature rose; the pulse quickened. Death took place on the sixteenth day after the operation.

It is only recently that the infectious nature of pneumonia has been admitted. We can distinguish, chemically at least, four different types of pneumonia. These are (*a*) pneumonia caused by Frankel's pneumococcus; (*b*) pneumonia due to Friedlander's pneumo-bacillus; (*c*) staphylococcic pneumonia; and (*d*) streptococcic pneumonia (Whitla). To these types we must add many varieties resulting from the association of these different pathogenic agents (King). The pneumococcus is represented by a characteristic microbe, of elongated form, elliptical, surrounded by a clear, transparent zone or capsule (Panc). From the biological point of view, the pneumococcus is developed neither below 24° nor above 42°. Gelatine is not suitable for its culture—we must use other media, such as bouillon. Certain animals, as well as man, are very susceptible to pneumococcic infection. The reactions following inoculation differ according to the susceptibility of the organism attacked, the virulence of the infecting agent, and the point of entrance of the microbe. In severe cases, when death takes place after a short time by pneumococcic infection, we find the germ in the blood, the spleen, the viscera, the peritoneum, the bone-marrow, etc. When, on the contrary, under the influence of certain causes, the inoculation has been insufficient to cause death, it is affirmed that the animals surviving have become insusceptible to a further inoculation. Resting on this established fact, we have for some years made efforts at vaccination, both preventive and curative, which, although not yet absolutely conclusive, are none the less very encouraging in their results.—Translated from *Annales de la Société Belge de Chirurgie* by HARLEY SMITH.

(To be Continued.)

Miscellaneous.

THE DAY'S DEMAND.

God give us men ! A time like this demands
Strong minds, great hearts, true faith and willing hands,
Men whom the lust for office does not kill ;
Men whom the spoils of office cannot buy ;
Men who possess opinions and a will ;
Men who have honor ; men who will not lie ;
Men who can stand before a demagogue
And damn his treacherous flatteries without winking ;
Tall men, sun-crowned, who live above the fog
In public duty and in private thinking.
For while the rabble, with their thumb-worn creeds,
Their large professions and their little deeds,
Mingle in selfish strife, lo ! freedom weeps ;
Wrong rules the land, and waiting justice sleeps.

—J. G. HOLLAND, in *Dietetic and Hygienic Gazette*.

Accidents after Adenoid Operations.

C. E. Holmes reports two cases in which the curette used for the removal of adenoids broke off just at the beginning of the sharpened portion of the loop. In one case the piece was removed without incident. In the other it was swallowed, but proper diet prevented any untoward consequences, and the piece was passed in the stools three days later.—*The Laryngoscope*.

Curettage of the Uterus.

The very popularity of this operation is a source of danger, for the gynecological proclivities of many general practitioners are apt to blind them to the risks associated with this procedure when carried out carelessly and without due regard to antiseptic precautions. We have heard of instances in which the uterus has been curetted in the consulting room without previous sterilization of the vagina, the patient being then allowed to drive or walk home. Even when carefully performed, curettage of the uterus is not unfrequently followed by troublesome and possibly dangerous peri-uterine inflammation, and when done by the inexperienced or careless, it becomes positively dangerous. That it is a valuable method of treatment in certain conditions of the uterine mucosa cannot be denied, but the facility with which it can be done, after a fashion, by anyone, is calculated to lead to its abuse.—*Med. Press and Circular*.

The Canadian Practitioner and Review.

VOL. XXVI.

TORONTO, AUGUST, 1901.

NO. 8.

Original Communications.

THE SURGICAL ASPECT OF GASTRIC ULCER.*

By HENRY HOWITT, M.D., M.R.C.S. (ENG.), GUELPH.

Although it is less than a decade since the attention of the profession was first specially directed to the subject, recent surgical literature contains numerous articles which bear upon the various phases to which gastric ulcer may give rise. To-day the surgical aspect is quite comprehensive, and includes not merely the operative procedures with which to meet the different forms of perforation, but it also embraces the surgical technique necessary to relieve the many abnormal conditions which may directly or indirectly arise from it. In this category we have by far the greater number of all cases of acquired stenosis of the pyloric orifice and hour-glass contractions of the stomach, the abscesses which may result from minute perforations, or infection, either in abdomen or adjacent part of thorax, and according to some authorities it includes the operative measures to arrest severe recurrent hemorrhages of undoubted origin, and also for the removal of any gastric ulcer which renders life miserable, and which persists after prolonged and intelligent trial of medicinal remedies.

In the limited time allotted to me, it will be impossible to give the details of any of the special branches pertaining to the subject, and most of them, if mentioned, will have necessarily little more than a passing notice.

Just a word in regard to the etiology. Our authorities mention traumatism, emboli, hyper-acidity of gastric juice, etc. We may enquire why jugglers can swallow pieces of glass, knives, nails, and other similar articles without ulceration necessarily following? It is admitted that, as a rule, gastric

* The discussion on Surgery read at the Ontario Medical Association.

wounds heal kindly in the absence of perforation. On thinking, it strikes one quite forcibly that the etiology depends on more than one condition—a micro-organism, a congenial environment for its growth, and probably an avenue of entrance. Does it not stand to reason that if these conditions be present we will certainly have arterial emboli, necrosis, digestion of the dead tissues, and the inevitable result—gastric ulcer? View the subject from another point. Did it never strike you as being peculiar that the best medicinal remedies for the disease (nitrate of silver, creosote, bismuth, and their relations) are germ destroyers?

Since the surgery of gastric ulcer includes phases before as well as after perforation, it is better, in order to avoid confusion, to first take up the procedures for dealing with the ulcer, or its results in which perforation is not a factor.

The field is new, the work is in a primitive state, consequently there is ample reason for divergence of opinion and discussion, therefore we should proceed cautiously, ever bearing in mind the responsibility that by right rests upon us. In these cases time is not an all-important factor, as is the case after perforation. Therefore, every reasonable medicinal remedy and means should be given an honest trial with favorable environment before we countenance active steps. With our present knowledge, it perhaps would be a good rule not to advise operative treatment unless we are sure that the patient has stenosis of the pylorus, hour-glass contraction of the stomach, or some other condition incompatible with recovery by simpler means. The surgeon should be a man of experience in abdominal work, of sound judgment, of known dexterity and resource. On the other hand, when the signs indicate inevitable disaster by anything short of surgical aid, we should not, as it were, stand by with folded hands till the unfortunate person is merely skin and bone, tottering on the brink of the grave.

For all the operative procedures it is essential that every precaution should be taken to prevent infection of wound by surgeon assistants, instruments, or anything that may be brought in contact with it. The stomach should be thoroughly washed with aseptic water by means of a siphon tube immediately before the anesthetic is administered.

In consequence of the absence of infection of the peritoneal cavity, it is not necessary to make the abdominal incision as extensive as when such exists. A median incision, extending from near the ensiform cartilage to the umbilicus, is the one generally adopted, but there is no valid objection to adding one at right angles to it, should the operator consider it advantageous.

The differential diagnostication between pyloric stenosis and hour-glass contraction of stomach presents difficulties, and may be impossible when the latter is situated near the outlet, for here the clinical history and symptoms are nearly alike in every respect. But ordinarily, by noting the amount of fluid that can be introduced, and that which can be obtained shortly afterwards with siphon tube, by observing the contour of epigastric region when the organ is distended and otherwise, and by the intelligent use of the X-rays when the stomach contains subnitrate of bismuth in suspension, we may generally distinguish between the two conditions. However, it is not of great importance, for both, when severe, are amenable only by surgical means, and the technique of which is nearly alike.

STENOSIS OF PYLORUS.

The operative procedure to be adopted depends wholly on the state in which the pylorus is found on examination. If the location of the ulcer can be easily determined, and there are neither extensive adhesions nor great thickening of the tissues, a pyloroplastic operation should be done. The part is first brought as well as possible into view, the peritoneal cavity guarded with sterilized gauze, and then the ulcer is removed by an elliptical incision running in the long diameter of the parts, the length of incision depending on the amount of contraction. It is then sutured in such a manner that when closed the line of union is at right angles to original incision. When correctly done, this procedure effectually removes the trouble and gives excellent results; but in a large percentage of cases adhesions and inflammatory changes in the parts render this ideal operation impracticable. Under these circumstances, what should be done? Pylorectomy is too severe a measure to be considered, unless we fear malignant changes. It is better to resort to gastro-enterostomy. The ulcer, or its cicatrice, is removed provided this can be easily accomplished, and then the jejunum, preferably by means of a Murphy button, is anastomosed either to the anterior or posterior wall of the stomach, as near the pylorus as the state of the tissues will permit, and a little above the line of greater curvature. There are objectionable features in the button, but on the whole it has fewer of them and more good qualities than any of the other methods.

In a paper read before the American Association of Obstetricians and Gynecologists in September last, I believe I had the honor of first calling attention to two practical points bearing on the matter. The first is to make sure before anastomosing that the proximal arm of jejunum is sufficiently long to pre-

vent tension in any possible movement of the stomach, and the other is to anchor the same arm to stomach wall with sutures just above and an inch or more to the right of point of anastomosis. The object of the first mentioned is obvious. The anchorage of the proximal arm in position stated does away with the spur or acute angle of the bowel, and prevents untoward events which frequently prove detrimental after gastro-enterostomy.

HOURLY CONTRACTION OF THE STOMACH.

In it, as in obstruction of the pylorus, the operator will have to be guided in the choice of procedure by circumstances. However, as a rule a gastro-plastic operation is the one to be preferred. In the performance of it the very same principles govern that do in pyloroplasty. The extent and irregularity of the constriction may make two or more incisions, instead of one, advisable in order to regain the normal contour of the organ.

A number of operators prefer gastro-anastomosis; that is, making a communication between the two compartments of the organ near the normal position of the greater curvature. It gives results that leave little room for improvement, and should the precarious state of the patient be such as to forbid a prolonged operation, it is undoubtedly the best course to pursue in the majority of cases. Gastro-enterostomy is the only safe procedure when the hourly contraction is near the pyloric orifice, and complicated by adhesions and inflammatory thickening of the parts.

There are instances on record of local peritonitis resulting from gastric ulcer leading to the formation of adhesion so placed as to cause serious interference with the function of the pylorus, the division of which was followed by complete relief.

As yet it is a moot question for future developments to decide whether it is ever justifiable in the disease to operate with the sole object of arresting hemorrhage. Although successful operations have been reported by Roux, Guinard, Kuster and others, still on the whole the results have not been good. The same may be said in regard to operations for the relief of pain and vomiting in uncomplicated ulcers.

We now come to perforating ulcer of the stomach. According to different authorities, the frequency of it is estimated at from 6 to 18 per cent. of all cases of gastric ulcer; probably 8 per cent. is not far from what actually occurs. It is not by any means of rare occurrence, and few medical men have been long in practice without having some experience with it.

The first successful operation upon this continent was performed in Toronto by Dr. Atherton in 1894, and the first on

record by Heusner in 1892. Up to last September, in the neighborhood of three hundred operations were reported in which the mortality was over 45 per cent. Recently the results have been much better. Success depends largely on early recognition and promptness of action, but the size and situation of the perforation, the nature of the infectious material present, the duration of the time after last meal and the perfection of the technique of operation are also important factors.

There are no reliable symptoms that are indicative of impending perforation, but fortunately in over 90 per cent. of the cases there is a previous history of dyspeptic troubles. When it occurs, the most reliable of the early symptoms in the acute form are sudden onset of excruciating pain in epigastric region, shock generally of a severe character, rigidity of abdominal walls, marked suppression of abdominal respiratory movements, arrest of peristalsis, and shortly all those of acute septic peritonitis. At first the pulse and temperature are not reliable, for as a rule they do not indicate the gravity of the trouble until too late for the surgeon to act with reasonable prospect of success. In my opinion this is a very important point to note in order to avoid under-estimating the true condition of things, for in the three cases that came under my personal observation both were at this period in every respect apparently normal. If the pain radiates in a severe manner into the back, it betokens perforation of the posterior wall of the organ, and if it does not do so the chances are that the trouble is on the anterior wall.

It is well to bear in mind that in the majority of patients the situation of the greatest suffering changes, at times rather quickly, owing to the irritating material gravitating downward toward the pelvis. According to my experience it descends more frequently to the right than to the left of the median line, and the anatomical position of the organs favors the course. Thus it is that cases have not unfrequently been diagnosticated as appendicitis. Opiates mask the symptoms more or less completely, and on this account should not be given until the diagnosis is made.

The third person on whom I operated for acute perforation, when first seen by me only complained of pain when firm pressure was made over the appendix. The initial symptoms had been exceedingly severe, but large hypodermics of morphine had given complete relief, and at the time of my visit the patient was quite comfortable, talked, laughed and made light of the trouble. Temperature normal, pulse 76; no noticeable abdominal rigidity, nor pain on pressure over stomach; notwithstanding, an operation immediately afterwards showed a perforation in posterior wall of stomach, general infection of

the peritoneal cavity and more than a pint of pus in pelvis. When the perforation is minute, especially if adhesion protect the part, the situation of pain will not change.

Gastric ulcer may at times be latent and lead to perforation without presenting beforehand a single sign of the impending disaster. The worst forms of the malady belong to this class, for here the ulcer runs too rapid a course to permit the formation of protecting adhesions.

Treatment.—As soon as we are satisfied that perforation has taken place, I believe it is good practice to give morphia hypodermically, while preparations are being made for operation. It relieves suffering, mitigates the shock, and, in the opinion of many, lessens the amount of anesthetic required to produce surgical anesthesia for a given time. Success largely depends on the shortness of the time that elapses before operation,—every minute is of importance, and delay is dangerous.

In the acute form the septic material is widely distributed in the abdomen, therefore the abdominal incision should be made in the median line, and sufficiently large to enable the operator to inspect by sight every portion of the cavity. It is my practice as soon as the incision is completed to at once eviscerate the bowels. This cannot be done satisfactorily when, as is generally the case, there is much tympanites present, but one or more small incisions in the prominent coils soon overcomes the distention. The temporary enterotomies are made in the circumference of the gut opposite the attachment of mesentery, and each one is closed before another is made. The eviscerated bowels are protected with sterilized gauze, which is kept warm and moist by irrigation. These procedures give us relaxed abdominal walls and ample room in which to make a thorough inspection.

Attention is now turned to the stomach; the part perforated is brought as well as possible into or out of the wound, the ulcer excised, and the opening closed with two or three layers of silk sutures. If the pyloric orifice is contracted by the ulcer we proceed as stated above in dealing with the stenosis of the part. When the trouble is in the posterior wall near the esophageal opening, it may be impossible to excise it, in which case it can generally be inverted and closed by layers of sutures. The abdomen should be thoroughly flushed with a large and somewhat forcible stream of normal saline solution, great care being taken with each flank, the pelvic cavity and lesser peritoneum. When drainage is necessary, the tubes or gauze should not be introduced through large wound, but through stabs as far from it as possible. The object should be to have primary union take place in the incision.

On replacing the bowels in the abdomen, it is well before

closing the wound to spread the omentum carefully over the surface of the small intestines and to fix it below with a suture in order to prevent the possibility of a coil becoming adherent to the line of incision. The wound, after the sutures are in place, should be dressed with dry sterile material and sealed so as to prevent infection by discharge from drainage tubes.

I am aware that many strongly object to evisceration and to temporary enterotomies, but practical experience has taught me that it is impossible to accomplish the object in general septic peritonitis without resorting to them. Contrary to the general opinion of the profession, I maintain that when these procedures are done with ordinary skill, instead of adding to the shock they produce the very opposite effect by making an otherwise almost impossible work comparatively easy. Moreover, enterotomy, by relieving bowel distention and permitting the escape of germ-laden matter, renders afterward vomiting and bowel paralysis much less probable.

The after treatment consists at first of the external application of heat, hypodermics of strychnia, normal saline solution, either by rectum or subcutaneously, and nutritive enemata. No food by mouth for four or five days. There is no objection to the patient having sips of warm water after the expiration of twenty-four hours.

It has fallen to my lot to operate three times for perforated gastric ulcer. All the patients are alive and well to-day. In two of them every portion of the peritoneal cavity contained pus, and partially organized flakes of lymph, and I am convinced that both would to-day occupy a grave had evisceration and enterotomy not been carried out.

In my paper, to which reference has already been made, attention is directed to the advisability in desperate cases of injecting a pint of peptonized milk, or other suitable nourishment, during the operation into the jejunum, and also when constipation is a factor, a saline cathartic into ascending colon. Both procedures may be accomplished in a few minutes by means of normal saline apparatus, but the needle should be large.

The local abscesses which result from minute perforations, when discovered, merely require to be treated in accordance with general surgical principles.

EXCISION OF THE UPPER JAW FOR SARCOMA, WITH PRESENTATION OF THE PATIENT AND SPECIMEN.

By HERBERT A. BRUCE, M.D., F.R.C.S., ENG.
Associate Professor of Clinical Surgery, University of Toronto.

Mr. President, and Gentlemen :

The patient whom I wish to present to you to-day is a woman, Mrs. C., age 34, whose upper jaw I removed for sarcoma. She was referred to me by Dr. George H. Bowles, of Woodhill. Her history is briefly as follows: About the last week in January she felt for the first time a slight swelling over the alveolus of the left upper jaw, which she thought was a gum-boil. She consulted Dr. Bowles about the end of March, and I saw her with Dr. Bowles the middle of April.

On examination I found a very hard swelling commencing just behind the second bicuspid, and extending backwards to the full extent of the jaw. Internally the mass did not extend quite to the middle line, and bulged externally to the extent of half an inch beyond what would be the line of the teeth, and extended upwards towards the antrum, but latter did not seem to be implicated externally. The growth in the roof of the mouth was irregular, covered everywhere by mucous membrane, and was not covered by bone, but seemed to be covering hard palate and alveolus. On looking into the nose a polypoid mass was seen, and the patient could not breathe properly through the left nostril. The cheek on the affected side was slightly more prominent. The skin of the cheek moved quite freely over the growth, and did not seem to be adherent to it. No prominence of the eye on the affected side was made out. A small portion of the growth was removed with cocain, and Dr. Silverthorn reported it to be a sarcoma, containing spindle cells, with a cartilaginous basis. I removed the jaw on April 29, 1901, assisted by Dr. Silverthorn, at St. Michael's Hospital, and the patient left the hospital on May 18th, having made an uninterrupted recovery.

The incision which I used in this case was the one originally proposed by Fergusson, and I think it leaves much less deformity than any other. The growth was very much more extensive than I had thought at first, in fact, than one could possibly make out previous to operation. A portion of it had extended into the nostril, and a large, hard mass into zygomatic-fossa and into the na-o-pharynx, and another portion had extended up into the orbital fat, having caused complete absorption of the floor of the orbit, except the anterior border.

Dr. G. Silverthorn has very kindly made sections of the growth, and I will ask him presently to give you a description of the exact nature of the growth, and to show you the specimen, together with sections under the microscope. I am going to have a dentist make an obturator for the patient, and when this is done I think the deformity will be very slightly noticeable. Owing to the complete absorption of the floor of the orbit, the eye has become slightly displaced, and in order to prevent her vision being blurred, I have ordered her a pair of glasses, with an opaque glass on the affected side and a clear glass on the other, so that with these spectacles she can see perfectly. I might say that the eye sight on the affected side is perfect if the other eye be covered. As to prognosis, I think in this case it is extremely good, as the growth was chiefly a chondro sarcoma, and we were able to get entirely beyond it. In connection with the removal of a growth of this kind, I might say that one would expect a very large and alarming amount of hemorrhage. There is a considerable amount, but it is easily controlled with sponge pressure and forceps. Care has to be taken, of course, that the blood does not get into the larynx. After all larger bleeding points are secured, there may still be oozing from the large raw surface, and in this case I had a sponge on a holder applied to the surface, and pressure kept up by the nurse for six hours afterwards. The raw surface was rubbed over with iodoform dissolved in ether. As to the after treatment, it is very important to keep the part as thoroughly aseptic as possible. This we accomplished by spraying with 1 in 60 carbolic solution every two or three hours the first week, and using hydrogen-peroxide about twice a day. In addition to this the surface was swabbed over about once a day with 1 in 20 carbolic acid solution.

Diagnosis.—In the diagnosis of these tumors of the upper jaw, there are three principal points to be attended to: 1, To distinguish the growth from fluid accumulation; 2, to determine whether it be simple or malignant; 3, to ascertain its primary seat.

1. In making the diagnosis from fluid accumulation in the antrum, the history of the case, and the uniform enlargements of the cavity without localized projection beyond any part of its walls the elasticity, and even the fluctuation that may, after a time, be detected, more particularly towards the outer side of the swelling, and at the junction of the mucous membrane of the cheek and the gum, will enable the surgeon to determine that it is not solid. But in many cases this is not sufficient, and it becomes necessary to make an exploratory puncture by means of the perforator, through one or other of the more thinned and expanded parts already indicated.

2. In determining whether the growth be simple or malignant, the surgeon will experience much difficulty, so long as it is confined to the cavity of the antrum, but when once it has perforated and passed beyond its walls, this point is easily solved. Yet, even whilst the tumor is still confined within the antrum, much light may be thrown upon its nature by attention to the rapidity of its growth; the greater this is, the more reason to suspect that it is malignant. Too much importance, however, must not be attached to this sign, for though as a rule fibrous, cartilaginous and bony tumors may increase less rapidly than the malignant, yet they may attain a very great bulk in a very short time. The age of the patient is of very little value in the diagnosis; I think, however, as a rule that the simple tumors occur more frequently in the young, whilst the malignant forms of the affection are more commonly met with in the middle and advanced periods of life. It must be remembered, however, that the sarcomata, which runs an essentially malignant course, infiltrating surrounding parts, and recurring in internal organs, do not, as a rule, affect the lymphatic glands. When once a malignant tumor has passed beyond the cavity of the antrum, and is thus relieved from the pressure of its walls, it grows with great rapidity, and where it can be felt under the skin is perceived to be soft and elastic. Its early protrusion into the nasal cavity and orbit is especially characteristic of its malignancy. It implicated the integuments of the cheek with an inflammatory edema, and the soft structures within the mouth, and throws out fungating masses in these several situations.

3. A point of very great importance in relation to operative interference is to determine the primary seat of the tumor, whether it springs from the cavity of the antrum, from the malar bone, or from behind the superior maxilla in the pterygo-maxillary fossæ. When it springs from the interior of the antrum, the buccal, orbital, nasal, or palatal walls of the cavity are expanded, and the line of teeth is rendered irregular. When the tumor primarily springs from the malar bone it pushes forward the cheek into a somewhat conical prominence, and dips down into the mouth between the gums and the soft structure of the face. It does not involve the palate or alter the line of the teeth, but rather spreads over the bones, and involves the soft parts by continuity of tissue, without any definite anatomical disposition. As the tumor increases in size, it will involve the anterior wall of the antrum, and project into that cavity. When the disease develops primarily behind the superior maxilla, between it and the great wing or the pterygoid process of the sphenoid the upper jaw bone is simply pushed bodily forward, there being little, if any, deformity in its out-

line, the line of the teeth not being displaced nor the walls of the antrum expanded. Yet it must be borne in mind that the difficulty of diagnosis is greatly increased by the fact that a tumor, though not originating in the antrum, may find its way early into this cavity, or may pass into the orbit through the sphenomaxillary fissure, and make its way forward amongst the bones of the face.

Treatment.—In the treatment of tumors of the upper jaw and antrum, nothing can be done except to extirpate the growth. When once a malignant growth of this part has passed beyond the osseous boundaries of the antrum, the question of removal becomes more difficult to decide. In reference to this point, I think that it may be stated generally that, if the cheek be freely movable over the tumor, and the lymphatic glands unaffected, the operation may be undertaken.

Complete Excision of the Upper Jaw.—The operation of excision of the whole upper jaw, together with the malar bone for tumor of the antrum, was first proposed by Lizars in 1826, though Gensoul, of Lyons, was the first man by whom the operation was actually performed, in May 1827. Since then it has been practiced repeatedly, and the names of Liston and Fergusson are inseparably connected with it, for the skill with which they devised, and the boldness with which they carried out the various steps of its performance.

Dr. Silverthorn, to whom I submitted the specimen for examination, reports as follows:—

Left upper jaw, with tumor attached, removed by the usual incisions and saw cuts for excision of the upper jaw.

Left central incisor has been recently removed, lateral incisor and the two bicuspids still intact and healthy.

In the usual situation of the three molars no trace of them is to be found, but extending from the second bicuspid backwards to the end of the alveolus, and internally to nearly the sawn edge of the bone, and outwardly one-quarter inch past the line of the alveolus, is a whitish mass somewhat uneven on the surface and projecting downwards one-third inch past the level of the palate.

This mass rises gradually from the bone all around, and is not pointed, but is unevenly flat on the surface, and is covered with mucous membrane intact, except for a new scar on its most prominent part, where a small portion was removed some days ago for microscopical examination.

This mass is hard to the touch, but is not "bony" hard, and on being cut into seems to be somewhat cartilaginous for a distance and then hard, gritty spicules are met with.

The anterior part of the upper jaw is intact to the line of the saw cuts, and includes the orbital plate, and this extends

backwards along the floor of the orbit for a distance of about one-half inch in an irregular line, until it meets with the upper surface of the tumor mass, which mass then forms the upper surface of the specimen and extends backwards for one and a half inches, and projects only slightly above the level of the floor of the orbit. The inner border of the upper surface ends in a flange-like portion standing upright, one-eighth inch thick, and projecting somewhat higher than the main mass. (This mass was to be seen in the nose.)

The main mass of the tumor is now to be seen fitting tightly the whole antrum cavity, bulging somewhat into the nasal space, encroaching on the orbital space, involving in its mass the postero-lateral and posterior walls of the antrum, the palate bone, the lower part of the pterygoid process of the sphenoid, and the alveolar process from the second bicuspid backwards, and part of the hard palate.

The mass is hard to the touch, whitish in color, smooth on the surface, and irregularly knobbed or superficially lobed.

Posteriorly there are two large knob-like processes extending backwards, one as large as the terminal phalanx of a man's thumb, and the other one about half that size. These knobs are deeply separated from the main tumor mass by a sulcus corresponding to about the depression between the superior maxilla and the pterygoid process of the sphenoid. At the inner end of this sulcus are spicules of bone apparently corresponding to the point of fracture of the pterygoid process, and these are the only traces left of the postero-lateral and posterior walls of the antrum, the palate bone, and the lower portion of the pterygoid process. Part of the muscles and the tendons of origin of the pterygoids are seen attached to and entering into the mass between the two knobs just described.

On separating the tumor mass from the intact anterior portion of the superior maxilla, it is found that the line of fracture extends across the base of the tumor just above the mass described as appearing in the mouth, and corresponding to the posterior of the alveolus. Here we see that the posterior portion of the alveolus from the second bicuspid backwards, the postero-lateral and posterior walls of the antrum, the palate bone, the lower part of the pterygoid process, and part of the hard palate, disappear in the substance of the tumor and from them radiate spicules of bone widely in the tumor mass.

Microscopical Examination.—The portion removed from the growth in the mouth for diagnosis showed microscopically short spindle cells in a matrix of more or less myxomatous tissue, becoming cartilaginous in the older portions of the growth. From this the diagnosis was made of malignant disease.

Sections prepared from other portions of the growth showed the same characteristics, except that the margin of the growth for a short distance was more distinctly sarcomatous, and in the deeper portions the cartilaginous change was very marked.

Deeper still there was true bony formation in a more or less perfect condition, and giving one the impression of a skeleton of bony spines radiating through the growth, with a tendency to extend vertically from the surface of the bones.

This would then be called an osteo-chondro-myxo-sarcoma.

Selected Article.

MEDICAL EXPERT EVIDENCE.

By E. F. B. JOHNSTON, K.C., TORONTO.

Owing to the increased number of actions founded on negligence and the modern methods of conducting criminal trials, evidence of experts has become an important factor in cases at Nisi Prius. Thirty years ago, the presence of a number of medical men as witnesses, for the plaintiff and defendant respectively, was very unusual. The plaintiff called the medical attendant, and his report was generally accepted as sufficient on that branch of the case. His evidence has now to be supported by several medical experts, by reason of the fact that the defence is certain to call several doctors, either to combat the allegation that the loss is due to the injuries complained of, or to minimize the amount of damage which the plaintiff seeks to recover. The same practice, to its fullest extent, holds good in cases involving mechanical construction and operation, and has also been adopted in the trial of issues turning upon disputed handwriting. Perhaps the increase in the volume of this class of evidence is more marked in criminal prosecutions and defences, when death is alleged to be the result of poison or external injury, than in other trials. It is not unusual, at the present time, to find in criminal trials a dozen doctors on each side, and in many instances medical opinions for the defence are found to be totally opposed to those on behalf of the Crown.

The reason for this condition of matters becomes apparent when we consider the methods of modern practice. Cases are now prepared more minutely, if not more thoroughly, than they were many years ago. Every detail is worked out, and every point of the adversary is anticipated. More money is expended in preparation and trial than formerly, and counsel are now dealing much more with the scientific elements of a case than they once did. Indeed, to be a successful counsel, a thorough knowledge of surgery and mechanics seems to be as requisite as familiarity with the law. This being so, it becomes a serious question to consider what weight ought to be attached to this kind of evidence, and whether the judge who relies greatly upon its value in charging a jury, or the judge who entirely ignores it, is in the safer channel.

Some judges, here as well as in England, are, it is well known, apt to criticize adversely opinion evidence, and they

point to the undisputed fact that ten medical men, for instance, will swear to certain causes and corresponding results, only to be flatly contradicted by eleven other equally eminent practitioners, and they, not unnaturally, perhaps, come to the conclusion that the evidence of medical men is moulded in the interest of the partisan. This conclusion may occasionally, but, I think, very rarely, be justifiable.

Members of the medical profession in Canada stand quite as high, and are actuated by as pure motives, as members of the Bar, and it very often happens in practice that medical experts who have gone into the case with the counsel or solicitor engaged, are not called because their conclusions are adverse to the party in whose interests they have been consulted. Medicine is not an exact science—perhaps not so much so as law. In numberless cases, the symptoms of the patient are purely subjective, and he misleads his doctor much more easily than the client misleads his legal adviser, either by the suppression of facts or by the coloring of matters wholly within his own knowledge.

Opinions must differ, and it would be as reasonable to make sweeping charges against judges who differ from each other, as to make similar charges against medical experts. Neither the judge nor the expert is speaking from a knowledge of actual facts as distinguished from evidential facts. Certain facts may be reasonably proved; others remain in more or less doubt. The medical man forms his opinion according to his best judgment on the facts as they are disclosed to and appreciated by him. The judge does the same thing. Both are liable to be mistaken. Other medical men and other judges differ from these opinions, and it would be cruel and unjust to say that those who differ are actuated by improper motives. The fact that one opinion is given under oath, and the other only indirectly so given, can make no difference, because the conclusions in each case are opinions at best, and the procedure in arriving at such conclusions is similar in both instances. Out of ten judges, five may find for the plaintiff and five for the defendant. All of them may be, and no doubt are, honest in their opinions. If therefore judges differ, with abundance of precedents and legal lore in unbiassed black and white before them, and with certain fixed principles, which cannot in themselves be guilty of motive or feeling, to guide them in forming a judgment, how much more may it be expected that medical experts will differ in their opinions, when so much depends on the diagnosis, the foundation for which often lies entirely within the control of the patient?

The ordinary lay witness is called to testify to a fact. Do we always or ever get the actual fact, or is it only the

opinion of the witness which we get?—an opinion which depends for its value on many factors, such as observation, opportunity, circumstances, appreciation, the senses, preconceived ideas, mental condition, etc.

In the late unfortunate occurrence of shooting a constable, several apparently truthful and personally disinterested witnesses were called to give a description of the man who supplied the weapons. No two of these witnesses agreed, and yet each was supposed to be describing an actual fact which occurred before his eyes and within a few hours prior to the evidence being given. What is this but opinion evidence? A car is running at fifteen miles an hour, and we will suppose this is capable of being established by scientific means as a certainty. Twelve men, the most reputable in the neighborhood, testify as to the speed of the car. They will be found to vary from perhaps ten to twenty or twenty-five miles an hour in their evidence on the question of speed. This again is opinion evidence, its correctness being dependent upon some of the many factors above alluded to. The mere repetition of a conversation is often more the result of opinion as to what the speaker said, than it is of the actual words spoken by him. One reason for this state of things is that our appreciation and knowledge of facts are purely relative, and to the extent to which the relation is defective or in error, to that extent the evidence is distant from the line of exactness.

In dealing with a question of this nature, we cannot overlook the principle necessarily underlying all evidence. Facts, as such, in reality cannot, as a rule, be presented to the Court. They can only be established through witnesses, and the facts that are proved are those established by the evidence, and not the real facts themselves. The real fact may be, and doubtless often is, quite different from that proved. A judge or jury pronounces on evidential facts. These facts reflect, to a greater or less extent, the mental bias and feeling as well as the imperfections of the witnesses. The evidence is but the impression made by the reality. It is a conclusion arrived at by mental process through the senses. Is it, therefore, much higher after all, than what is known as mere opinion evidence?

If this argument be correct, there is, therefore, but little distinction to be drawn between the evidence of the medical expert and that of the ordinary witness, assuming both to be equally honest. The testimony of either is generally to be more relied on than that of the party litigant. Medical men differ in the witness box in no greater degree than they do in the treatment of a patient, and it would hardly be safe to argue that they administer medicine with a bias or from improper or interested motives. *Very great weight ought to be*

given to the evidence of medical experts who stand well in their profession, even when grave differences exist in their opinions ; just as a counsel attaches a high value to the opinions of judges whose judgment may be against the counsel's contention.

It is because medical men honestly differ that they are called as witnesses, and in that difference, the jury may often reach the truth. Upon a question, with which the lay mind is not familiar, what after all is the best evidence? Take the case of an accident as an illustration. First, the mechanical side of the question comes up for discussion. Who is better qualified to speak on the subject,—the counsel and the lay witness, or the man whose whole life has been devoted to working or perfecting the machine in question? Then the medical or surgical phase must be dealt with. Shall the locomotive engineer or the man who runs the saw in the mill be taken as a witness in preference to the physician or surgeon, whose education, practice, and experience have made him eminent in his profession? If truth is the objective point, one would naturally go to those who should know most concerning the matter. If a verdict only is looked for, then the verdict might as well be given without evidence as with it. What would any court say if a blacksmith were called to testify as to the law in force in a foreign state? What would the same court say if a judge were called as a witness to speak as to the extent and consequences of the bodily injuries complained of? It is always of vital importance that the exact character of bodily injury or disease should be established. How can this be established except by the opinions of medical men? We trust our lives and the lives of our families to these medical men. Why should we not trust our private rights of a civil or criminal character to the same judgment? It is of the greatest importance to the man who is prostrated by disease to have honest and careful opinions regarding his position and treatment. We accept these opinions from our attendant physician. Why should we impute wrong motives to medical men, when only a few hundred dollars are at stake, instead of a life? Why should we harshly criticize or ridicule the evidence of those who are highly respectable members of the community and well-known reputable men in their profession, when we trust them in the ordinary business transactions of life, and in whose hands we are willing in time of trouble to place our physical and mental safety? Under such circumstances, it seems reasonable that the evidence of such men ought not to be lightly treated, nor should their opinions be looked upon as of less weight and value than the evidence of any other witness.

It is true there is a rare specimen of the medical expert witness who sees nothing but that for which he is paid to see. He is a partisan of the worst description, and doubly dangerous, because he knows he is beyond the reach of the law as regards perjury. Not content with giving an opinion which is measured by the money of his employer, he is ready to invent all kinds of reasons, theories, and excuses to contravert well established principles or clearly proved facts. Instead of answering a question, he proceeds to deliver a lecture from the box. It is almost impossible, from such a witness, to get a definite answer to any question, however simple. This specimen of the medical expert is the most dangerous of expert witnesses. His glibness is equalled only by his moral obliquity. His readiness in explanation is largely the result of an unscrupulous, scheming mind. Falsehood under oath is a matter of no moment to him. He may at times accidentally tell the truth, but it may be safely conceded that he should on all occasions be discredited. The man who wilfully admits nothing except that which tells in favor of his client, is dishonest, and should not be believed. Such evidence, fortunately, is very rare in our courts, and it would not be fair to condemn the whole medical profession by reason of the crookedness of one or two individual members. No continued harm can be done by such a witness, as the judges need only one or two repetitions of such conduct to enable them to place witnesses of that character in a proper light before a jury.

In order to remove this class of expert evidence from the region of discussion, and put it beyond any imputation of partisanship, several proposals have been made. The most feasible would appear to be that providing for the appointment of a medical board of witnesses. The first qualification of the members would be competence and experience, and the second, their moral standing in the profession. We have now in practice a very limited application of this principle. A medical man is frequently appointed by the court to make an examination and report with regard to the injuries and condition of the person complaining. This, however, is not of any great practical value, because in many instances his evidence may be literally swamped by a large volume of equally credible testimony, adduced on behalf of the party affected adversely by the report. In cases of crime where insanity is urged as a defence, a board of say five medical men would be very satisfactory. Appointments to the board would be made by the court, but the law would no doubt make provision for all parties interested being represented before the judge making the appointment. In negligence actions, the same principle might apply, but limiting the membership of the board to three

medical men. With reference to issues involving mechanical or scientific construction or operation of machinery, a similar board of skilled artisans, engineers, or machinists might be constituted. These boards would pass upon the question specially submitted to them, and the members would be subject to cross-examination to the same extent as the expert witness is under our present practice. The evidence required in these cases partakes somewhat of the nature of the judgment of the court, and the appointment of a board of skilled witnesses is analogous in principle. Two men cannot agree upon the facts necessary to determine their respective interests, or upon the law governing their relative rights. Figuratively speaking, they call in a judge to determine the matters in issue. He determines the matter in the capacity of a skilled expert. The party dissatisfied goes to a court composed of several judges, and there seeks what he thinks is the redress to which he is entitled. The proposition as to expert evidence takes the opinion of the larger court of three or five experts in the beginning instead of at the end, but the same result is reached. If this or some similar scheme were adopted, there would be a great saving of expense, and the evidence would perhaps be more satisfactory to the judges. Under some such system, there would certainly be no ground for suspicion as to the honesty of medical expert evidence, and there can be no doubt that the parties to the action would continue to receive the full benefit of those differences of opinion, which do now, and always should, exist between medical men who are called upon to make practical application of a science beset with grave difficulties and fraught with the most serious problems of life.

—*Canada Law Journal.*

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, J. FERGUSON, T. M. McMAHON, H. J. HAMILTON,
AND INGERSOLL OLMSTED.

Pneumococcic Peritonitis.—(Continued from July issue.)

We know that the pneumococcus is the habitual guest of certain natural cavities in man, especially of the mouth and lungs. We must not, therefore, be surprised to see the development of a pneumococcic infection, under special circumstances which have as their result the awakening of the virulence of the microbe or the diminishing of the resisting power of the tissues which lodge it. Generally, the pneumococcic infection in man is localized in the lungs. It is not rare, however, to find other organs attacked, either primarily or secondarily. Observations, becoming more and more numerous, prove conclusively that no tissue, no organ, is safe from it.

The mechanism of the primitive infection is easily understood:

“The pneumococcus, an impartial guest of the cavities, suddenly puts forth all its virulence. Hence angina with false membranes, otitis, meningitis, metritis, and perhaps peritonitis. Secondary affections are caused by the fact that the germ borrows the lymphatic channel, or rather the blood channel, in order to swarm through the organism, creating thus a general infection, whence phlegmasia, endocarditis, pericarditis, arthritis, etc.”—(A. Lippmann.)

Among the various results produced by the pneumococcus on the respiratory system (pneumonia, broncho-pneumonia, bronchitis, pulmonary congestion); on the circulatory system (endocarditis, pericarditis); on the digestive system (angina, stomatitis, peritonitis, gastritis); on the nervous system (cerebro-spinal meningitis, paralysis); on the locomotor mechanism (periostitis), etc., there are some which interest the surgeon more particularly. We will mention pleurisy, periostitis, otitis, pneumococcic arthritis and pneumococcic peritonitis.

The case of pneumococcic peritonitis which we described (translated in July issue of CANADIAN PRACTITIONER) must be considered, from its development and its progress, as of primitive character. Weichselbaum, Waterhouse and other authorities admit the possibility of primary pneumococcic peritonitis. We shall not discuss the path which the germ may have taken in order to invade the peritoneum, nor what were the probable causes of this contamination of the peritoneum, not having

positive elements for such a discussion. We admit, then, that in our case, under the influence of some unknown cause (diminution of resisting power of the patient or exaltation of the virulence of the pneumococcus) the microbe, which had remained dormant up to that time, was able to develop directly its injurious effects upon the peritoneum, and to give rise to the inflammation above described.

The symptomatology of pneumococcic peritonitis is clear and typical. The history of our patient gives an exact and faithful reproduction thereof. The beginning is abrupt and sudden. The first sign is a violent abdominal pain with elevated temperature (39°-40° C.). At the same time occurs abundant vomiting, accompanied by fetid diarrhea. This morbid picture is continued for a few days, with some improvement of the pain and vomiting. Soon a change of the symptoms is observed; the fever disappears, but—an important fact—the abdomen increases in size as a result of the presence of an exudate. Finally—a symptom almost pathognomonic, upon which Brun has especially insisted, there is produced at this time a redness and protrusion of the umbilicus. If one delays intervention, abscess forms here, bursts and gives issue to a peritoneal discharge consisting of greenish, creamy pus with abundant fibrinous false membranes. This is a termination which sometimes leads to recovery, and indicates the plan to adopt in the treatment.

Left to itself, pneumococcic peritonitis has a most gloomy prognosis (85 per cent. of deaths). The rational treatment of this disease, whose value experience has indisputably proved (at least 80 per cent. of cures), consists of exploratory laparotomy, cleansing the pus pocket and drainage through the vagina.

In a discussion which took place in the Surgical Society of Paris on a case of general peritonitis (Malapart, 1897), all the surgeons were unanimous in admitting the relative safety of pneumococcic peritonitis treated by laparotomy.

In one case we were not so successful, though the patient markedly improved after the operation. The autopsy showed that a large intestinal perforation occurred—this was the cause of death. This complication must be attributed to the infective agent, which has been known to produce a similar effect on the stomach. (Certain authorities state that gastric ulcer of pneumococcic origin is not rare.)

As for the prognosis and treatment of pneumococcic inflammations in general, it is, as Lippmann says in closing his excellent monograph, in the search after immunization against the pneumococcus that we must hope to find an abortive medication, not only pathogenic, but truly specific.—Translated from *Annales de la Société Belge de Chirurgie*, by HARLEY SMITH.

The Present Status of the Widal Reaction.

Although the Widal test has not so far fulfilled the hopes at first entertained, experience has shown it to be capable of affording very valuable assistance in the diagnosis of obscure cases of typhoid fever, and in differentiating this disease from others which happen to simulate the clinical aspects of the typhoid state. Opinions are at variance as to the trustworthiness of high dilutions, allowing a correspondingly protracted time for the phenomenon of agglutination to take place, as compared with the opposite plan of employing lower dilutions with a shorter period for completion. In the United States the tendency is in favor of employing low dilutions, whereas in Europe high dilutions are gaining ground. Taking a large number of cases which clinically appeared to be typhoid, only four or five per cent. failed to give the reaction, and in very few indeed of the positive cases was there any reason subsequently to question the accuracy of the diagnosis. It may be borne in mind, however, that the power to cause agglutination remains in the blood for long periods of time after recovery from typhoid. It may, indeed, remain as long as ten years, though the average duration is under five years, and this may conceivably explain a certain proportion of the cases in which the reaction has been obtained in persons obviously not then suffering from typhoid. Examination of recent statistics shows that the agglutinating power is weaker in children than in adults, that it appears earlier in the disease and does not persist so long. The agglutinating power can pass through the placenta, or may be acquired through the mother's milk; but, in either case, it is of comparatively short duration. It may be remarked incidentally, that the presence or preservation of the agglutinating power does not appear to afford immunity against infection or reinfection by typhoid. One conspicuous drawback in the employment of this test is its tendency in certain cases to yield negative results until very late in the disease. It sometimes happens indeed that the existence of the agglutinative power cannot be demonstrated until convalescence has been established, no explanation is at present forthcoming of this delay. The fact is that we are in ignorance of the precise nature of the reaction, hence we are unable to appreciate its exact significance. It may on the one hand be a phenomenon of infection, or, on the other hand, it may be a manifestation of leucocytic reaction of the development of bactericidal power. When this point has been cleared up the test may not only afford more absolutely trustworthy diagnostic indications, but it may also influence prognosis by enabling us to measure either the intensity of the infection or the energy of the protective reaction. In the meantime Widal's reaction is a most useful aux-

iliary in diagnosis, and as it has come more and more into general use, it has proved of value in many unexpected directions.—*Medical Press and Circular*.

Apoplexy and Hemiplegia.

H. N. Moyer, in *American Medicine*, notes the fact that the term apoplexy is still loosely used even by the best writers. He refers to the prevalent misconception of the relation of cerebral arterial disease to sudden death—meaning by the latter a death which takes place within a few minutes. The latter is almost never due to vascular involvement in the brain, excepting where the cardiac or respiratory centres are involved. Sudden death is almost always due to heart disease. It would be desirable if a diagnosis could always be made between cerebral hemorrhage and thrombosis, but this is not possible. In hemorrhage the treatment should be directed to lower vascular pressure, while in thrombosis exactly the opposite line of procedure should be employed. He condemns the administration of strychnine and ergot; useful as the former is in heart failure, it has no place in the therapeutics of cerebral thrombosis or hemorrhage. Cases of this kind have a fatal termination from respiratory failure, and strychnine increases vascular tension, and so precipitates the condition which it is designed to relieve. Ergot is of no value in controlling hemorrhage into the brain, but on the contrary directly favors it, because it increases vascular tension. Ergot is only of use in postpartum hemorrhage, and there it is of value because it contracts a hollow muscular organ and so mechanically occludes the vessel. It has no influence in hemorrhage into the organs in which no such muscular structure exists.—*Medicine*.

Hypodermic Medication.

After drawing the required amount of fluid into the syringe, expel the small globules of air by everting the syringe and pressing the piston upwards, until a drop of the liquid appears at the point of the needle. Draw the skin up and tense at the required place, and press the needle through into the subcutaneous tissues; which done, inject the fluid slowly into them. After the needle has been withdrawn, place the finger over the puncture for a short time. The veins, inflamed spots and bony prominences are places to be avoided in puncturing; the arm, thigh, abdomen, back and calf of the leg are places suitable for puncturing. In hypodermic medication the dose is about one-half that required by the mouth, and the effects are more rapid, certain and exact.—*Bartholow, Maryland, Med. Jour.*

SURGERY

IN CHARGE OF EDMUND E. KING, HERBERT A. BRUCE AND L. M. SWEETNAM.

Primary Sarcoma of the Stomach.

W. Soltan Fenwick in the *Lancet*, gives the following points as diagnostic of primary sarcoma of the stomach: The spindle-cell variety and myosarcomata are chiefly characterized by their comparatively slow growth, the smooth, firm and movable tumor; the frequent absence of pain, vomiting, and anorexia: and the tendency to repeated hemorrhage. 1. The disease usually occurs before thirty-five years of age: so that the younger the patient the greater the probability that the malignant affection is sarcomatous in character. 2. In many cases there is a slight, but continuous pyrexia accompanied by rapid and profound anemia, while in carcinoma fever is always absent during the early stages of the complaint and the cachexia much more gradual in its development. 3. Simple enlargement of the spleen is by no means infrequent, but is never met with in cancer unless the organ is involved in the growth. 4. According to Kundrat the tonsils are apt to enlarge and the follicles upon the side of the tongue may become swollen or ulcerated. 5. Secondary deposits in the skin occur in a notable proportion of the cases and permit of excision and microscopical examination. It should be remembered, however, that sarcomatosis has been met with in true cancer of the stomach (Leube). 6. A large nodular tumor due to infiltration of the omentum, or a greatly enlarged liver with secondary growths in its substance, are rarely met with. 7. Persistent albuminuria is often observed in sarcoma, but is exceptional in cancer. 8. The discovery of pieces of morbid growth in the vomit renders the diagnosis certain.

Tuberculous Glands of the Neck.

G. Bretton Massey advocates, in the treatment of tuberculous glands of the neck, a modification of the cataphoric method as used successfully for the destruction of cancer. The object of the method is the destruction of the bacilli by the cataphoric diffusion among them, of nascent oxychloride of mercury, developed in their midst by the electrolysis of metallic mercury held in contact with a small gold electrode. A small opening is made through the skin, and into the gland by a narrow bistoury, under a chloride-of-ethyl spray, and into the opening is thrust a sliver of amalgamated zinc to act as an anode, not insulated, of a weak galvanic current, 1 to 3 milliamperes, which is turned on gradually and maintained for a few minutes to cauterize the tract and keep it patulous for the treatment proper. When the

tract has received a sufficient impregnation with the mixed oxychlorides of zinc and mercury thus developed to keep it patulous for a few days, the zinc electrode is withdrawn and an insulated gold electrode about the calibre of a piece of No. 18 wire is inserted, its point having previously been amalgamated and made to hold as much mercury as possible. This instrument is left bare for one-quarter inch from the point only, in order that all the current-action shall be expended within the gland, the remainder of the instrument being insulated with fused hard rubber or fused shellac. From 2 to 10 milliamperes are now turned on and maintained for ten minutes or until all the mercury has been dissipated from the old surface, after which a piece of absorbent cotton or lint is placed over the opening, topped by a piece of plaster, and the patient returns at intervals of two or three days for a repetition of the application. The endermic application of cocaine may be used to deaden the slight pain of these applications, a mere drop of a ten-per-cent. solution placed in the opening being an excellent preliminary to the later applications. The purpose of the sinus thus formed is the drainage of the products of the dead bacilli and deposited chemicals, as well as for a direct application to the germ-colony.

Observations of two cases has given rise to the belief that the germicidal action is not confined entirely to the gland to which the application is made, but that the chemical deposited in this situation drain downward to the next glands in the chain and favorably influence any infection of these glands. The final result is the destruction of the tuberculous bacilli, without necessarily destroying all the gland-tissue not destroyed by the disease, and when the opening is allowed to close the scar left is a mere point, and the general health of the patient will be found to be improved. The sinus requires no special precautions against septic infection while open, by reason of the powerfully antiseptic chemicals deposited within and about it.—*Sajous' Monthly Cyclopedia of Practical Medicine, and Universal Medical Journal, July 1, 1901.*

Syphilis and the Expectancy of Life.

The following remarks made by Hyde in the *Medical Examiner* in reference to the life expectancy of those who have acquired syphilis is of considerable importance, and we clip from *Sajous' Annual and Analytical Cyclopedia of Practical Medicine*, volume vi, the following six contentions in reference to this disease: 1. Inherited syphilis is one of the most fatal of all disorders affecting mankind, and under the most favorable circumstances, apart from abortion, 90 per cent. of children born living subsequently die. 2. Acquired infantile

syphilis is rare, and is easily treated, and probably a large proportion of all infants so affected survive. 3. In acquired syphilis in adults, between 80 and 90 per cent. escape gummata. The percentage of patients affected with gummata who die probably does not exceed two per cent. 4. The expectancy of life is probably not affected by the coincidence of syphilis with other diseases, and the prospect that the patient with acquired syphilis will ever suffer from struma, cancer, or tuberculosis is exceedingly small. 5. The natural evolution of acquired syphilis in untreated cases is not in the direction of a fatal issue, but rather in the line of physical degeneration, due to involvement of the nervous system and the bones without affecting the organs essential to life. 6. It is unfair to charge an extra risk for the insurance of syphilitic applicants otherwise in sound health. The syphilitic applicant for life insurance should be examined with a view not so much as to his syphilitic history as to his condition with relation to all other items making up a satisfactory risk. In other words, if he has a good family history, a sound constitution, excellent habits, and has reached, but not passed, a satisfactory age, his expectancy of life is probably that of other individuals in similar conditions without added risk on account of syphilis.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES F. W. ROSS, ALBERT A. MACDONALD,
AND K. C. McILWRAITH.

Rupture of the Uterus in Placenta Previa.

Mr. J. Preston Maxwell (Amoy, China) read a paper on spontaneous rupture of the uterus in placenta previa. He had met with three cases of this accident. In the first, the woman died undelivered within a few minutes of the rupture; in the second, the uterus was found ruptured posteriorly after delivery, and she had dangerous hemorrhage, but recovered after antiseptic gauze-packing of the rent. The details of the third case were as follows:

S., a primipara, aged 23, had been in poor health during her pregnancy. Fortunately she was more enlightened than the majority of Chinese women, and called him in when labor began. She had weak, poor pains, and the child was evidently at full term; the cervix dilated very poorly, especially posteriorly. There was a little more bleeding than usual, and this, combined with the irregular dilatation of the os, which would admit two fingers, caused a suspicion of placenta previa, and

the edge of the placenta was felt behind. As she lived close by, it was decided to get her into a better condition by procuring some sleep, and to that end she was given a dose of chloral and bromide. She went to sleep, and when next visited about twelve hours after, the cervix had closed up, and admitted one finger with difficulty. There was no further hemorrhage, and at the end of fourteen days labor came on and the os dilated, but still it did not dilate well behind. When nearly dilated he left the room for some two or three minutes, but returning, found she was beginning to bleed badly, and he at once ruptured the membranes, and, the child's head coming down, placed his hand on the uterus and kept it there, but without in any way stimulating it. At the end of ten minutes the child was born without assistance. The moment it was out of the vagina blood simply pumped out, and death appeared imminent. Turning her on her back, he quickly expressed the placenta and with his hand on the abdomen pressed the uterus forcibly downwards and backwards, and administered ergot by the mouth and by hypodermic injection. The bleedings, which had been checked by the pressure, came from a rent of the posterior wall of the uterus and the cervix, and the examining fingers could be passed directly into Douglas's pouch. He packed the rent with gauze wrung out of biniodide of mercury lotion, and kept up pressure on the uterus for two hours. The gauze was removed in 24 hours. No douche was given, and no septic symptom arose, and her recovery was uneventful. The child weighed five pounds, and was puny. At the end of three weeks it developed pneumonia owing to a chill, and died after two days' illness. The placenta was a placenta previa marginata, and the rupture had occurred through the entire cervix and lower portion of the placental site.

It was well known that in cases of placenta previa the wall of the uterus was not strong, and in some cases fatty degeneration of the uterine muscle had been discovered. What exactly set up the rupture in these cases was difficult to tell. A severe pain, accompanied by an expulsive effort, was sufficient to start the rent, and once started it was apt to enlarge mechanically. As to the treatment, laparotomy and suture would have been extremely difficult and almost certainly fatal. And it was impossible to suture the rent *per vaginam*, especially in a dirty Chinese home.

Dr. F. H. Champneys said that the case was remarkable in several ways. The small size of the child, the absence of malpresentation, the absence of interference, and the absence of anything in the history to account for the accident combined to make it worthy of record. As to the treatment, he thought it was perfectly correct; the plugging of the rent with gauze was

the most successful treatment in cases in which the fetus and placenta had not escaped into the peritoneal cavity.

Dr. G. E. Herman concurred with what Dr. Champneys had said as to the merit of the paper. Dr. Maxwell had quoted some current statements, without however endorsing them as his own, and therefore he could hardly be held responsible for them. He said that in placenta previa the uterus had been observed to be soft. It was true that some writers had said so; others had said it was hard. He himself did not think there was any marked or constant difference in consistence between the uterus with placenta previa and any other pregnant uterus. It had also been said that spontaneous rupture of the uterus was due to fatty degeneration, and in that he followed the statements of eminent writers on midwifery. But he (Dr. Harman) knew of no good evidence to show that fatty degeneration of the uterus was present in cases of rupture of the uterus. Fatty degeneration of the uterus had been said to take place in the puerperium, but the more recent researches of Helme showed that it was no part of the process.

Dr. Drummond Robinson, in reference to points raised by Dr. Herman regarding fatty changes in the involuting uterus, stated that he had had the opportunity of examining microscopically two specimens of involuting human uterus. Careful staining with osmic acid failed in both instances to demonstrate the presence of fat.

Dr. Herbert Spencer said that the case was one of unusual interest, and had been judiciously treated and well recorded. He was pleased to find that in two cases mentioned by the author in which gauze-packing had been employed, recovery ensued. Dr. Spencer has called attention to this method of treatment in a paper read before the Society last year, giving notes of four cases successfully treated in this way. His previous experience had been that every case of rupture of the uterus, about eight in all, had died. At the present time it was usual to recommend abdominal section for complete rupture of the uterus; but that operation, especially if followed by hysterectomy, was generally too severe a shock for a patient suffering from a rupture of the uterus, and if those with experience of this accident would publish all their cases as he had done, he had no doubt that the results of hysterectomy would compare very unfavorably with those given with gauze packing.

Dr. Amand Routh had seen one case of spontaneous rupture of the uterus with placenta previa. The patient was eight months pregnant, and had had several attacks of hemorrhage. Under deep anesthesia the cervix was found rigid, and it was not easy to insert the finger. An anterior marginal placenta-

tion was found. The tongue of placenta was separated from the lower uterine segment, podalic version performed, and the leg brought down to the half-breech, which was left *in situ* for nature to complete the delivery. In about twenty-four hours, the patient's doctor being then in charge, labor pains came on and the child and after-birth were spontaneously expelled. In two days septicemia was evident, and the doctor then found that the uterus had ruptured anteriorly. In spite of all treatment the patient died. He had no doubt that Dr. Maxwell's treatment by packing the rent with antiseptic gauze was the correct one to adopt, arresting hemorrhage and securing drainage.

The President thought the treatment was not only excellent in "a dirty Chinese home," but was the very best treatment in a London or any other hospital with every appliance available. The treatment of rupture of the uterus by packing with gauze was most successful in saving life. He certainly considered that much of his success was due to the fact that the parts had not been rendered septic by the accoucheur's hands. He related details of a most extensive rupture of the uterus which was treated by packing, this being renewed under chloroform every day for twelve days in succession, and then less frequently. The patient then became very ill, and at last a large slough was extracted from the right broad ligament, and ultimately the patient recovered.—*Brit. Med. Jour.*

Aniodol, the new Antiseptic in Obstetrical Practice.

At the recent Paris Congress, Pinard gave the weight of his great authority in favor of this new remedy, which was first used by Professor Quenil, of Marseilles. Throughout France, obstetricians have become aware of the immense benefits to be derived from a substance which is at once powerful, harmless, and trustworthy. Apparently aniodol has no vogue outside of France, and for that reason Dr. Sedan, of Marseilles, brought up the topic before the obstetrical section of the congress.

A series of seventeen cases from the Maternity of the Conception, at Marseilles, was reported by Sedan. In each case puerperal infection appeared to be under way, and aniodol seemed to regulate the attacks. The same antiseptic is also in regular use in the surgical wards of the Hotel Dieux, at Marseilles.

After Sedan had finished the delivery of his paper, Pinard made the following statement:

"I employ aniodol in my service; aniodol soap is simply a wonderful substance, and is of special value as a deodorant. Aniodol injections quickly suppress the fetor of lochia.—*Obstetrics.*

The Treatment of Fissure of the Nipple.

Dombrovsky, says the *Deutsche Aerzte-Zeitung*, for October 1st, advises bathing the nipple with a 2 to 5 per cent. solution of potassium permanganate several times a day, and says that a cure will result in a week at the most. The first few applications are slightly painful, but the pain soon subsides. Nursing need not be interrupted; before the breast is offered, the nipple is washed with warm water, and the adjacent parts are covered with some waterproof material, or with a thick linen compress having an opening cut in it for the nipple to project through.—*N. Y. Med. Jour.*

The Real Value of Quinine in Labor.

Fussel (*Therapeutic Gazette*, January 15th, 1901), thinks quinine is not so frequently used as it should be in cases of labor. He has never found it to fail when the labor pains were slow and inefficient from uterine inertia. Given in 15 grain doses the drug causes an increase of force and frequency of uterine contractions exactly resembling normal labor pains. Cinchonism did not occur in these cases, and the employment of the drug frequently obviated the use of forceps.—*Am. Med.*

Vomiting of Pregnancy.

Monin (*British Medical Journal*) has been struck by the resemblance which the symptoms presented by certain pregnant women bear to those of hypersecretion. Gastric pain, heartburn, acidity, nausea, and vomiting, occurring especially in the morning, and relieved by taking food, are all symptoms commonly observed both in hypersecretion and during pregnancy. As a consequence of the suggestiveness of this observation, satisfactory results have been obtained in the case of pregnant women by administering daily five doses of sodium bicarbonate, each consisting of 30 grains, given in a capsule.—*Medical Brief.*

In *American Medicine* for June 8th a report is given of the 26th annual meeting of the American Gynecological Society, which was held in Chicago, on May 30th, 31st and June 1st. On the third day a symposium on Cesarean Section was held. We subsume the reports of some of the papers:

Circumstances which Render the Elective Section Justifiable in the Interest of the Child Alone.—By DR. REYNOLDS.

(1) The Cesarean section performed late in labor, or on the presence of infection of the uterus or other complicating constitutional conditions, has been shown by the experience of almost

every operator who has tried it, to have so high a mortality as to be totally unjustifiable when performed in the interest of the child alone; (2) when a Cesarean section is performed on healthy women, early in labor, and under otherwise favorable circumstances, for merely mechanical indications, it has, in skilled hands, no mortality other than the fractional percentage incidental to all considerable operations *per se*; (3) the inconveniences and high morbidity rate of symphysiotomy render it considerably inferior to the section as an operation of choice, but it is an operation which, as compared to craniotomy or prolonged and forcible high forceps work without it, involves almost no increased risk to life. He, therefore, believes it to be the operation of choice in the somewhat limited number of neglected cases (*i.e.*, those for which the Cesarean is ruled out) in which the pelvic contraction is within the range where the extraction of a living child without symphysiotomy is difficult or impossible, but after symphysiotomy is safe or easy; (4) the induction of premature labor for contracted pelvis results in so high a fetal mortality as to be unwarranted when placed in opposition with the performance of the Cesarean section at the beginning of labor and in favorable cases.

The Place of Symphysiotomy as Contrasted with Section.—

By CHARLES JEWETT, New York.

Dr. Jewett presented the following conclusions: Symphysiotomy is still a very useful operation within a very limited range of pelvic contraction. It is suited to conditions in which only very little additional pelvic space is required for delivery. It is a valuable recourse, therefore, in cases in which forceps unexpectedly prove inadequate. Axis-traction forceps, with the aid of posture, should always be tried before resort to symphysiotomy. Its results would be much improved by restricting it to pelves with a conjugate of not less than 7.5 c.m., 3 inches. Under equally favorable conditions, its total mortality should be no greater than that of Cesarean section. When the pelvic space permits, it should replace Cesarean section in the presence of exhaustion. It may be elected primarily as an alternative of Cesarean section, when the operator can be assured that the degree of obstruction is well within its safe limit. Here the choice of operation is largely a matter of individual preference. Within its proper field, symphysiotomy is better than Cesarean section for an operator of little experience in abdominal surgery.

Indications as Furnished by Pelvic Contractions.—By J. W. WILLIAMS, Baltimore.

In 2,123 cases delivered in the Obstetric Department of the Johns Hopkins Hospital, 278 (13.1 per cent.) had contracted

pelves. The pelves were measured both externally and internally, and designated as contracted when the conjugata vera was 10 cm. or less in generally contracted, and 9.5 cm. or less in flat pelves. Nine hundred and forty-one of the patients were white, and 1,182 black. Contracted pelves occurred in 6.91 per cent. of the former, and 18.1 per cent. of the latter. That is, in every fourteenth white, and every sixth black woman; 199 of the 278 cases ended spontaneously (71.57 per cent.). The number of spontaneous labors decreased with the increase in pelvic contractions, as shown by the following table:

Conjugata vera 10-9 cm.,	77.28 per cent. spontaneous.
Conjugata vera 8.9-8 cm.,	61.54 per cent. spontaneous.
Conjugata vera 7.9-7 cm.,	33½ per cent. spontaneous.
Conjugata vera 6.9-5.5 cm.,	0 per cent. spontaneous.

The cases requiring operation were delivered by high forceps, version, symphysiotomy, Cesarean section, craniotomy upon the dead child, or embryotomy, according to circumstances, giving a gross fetal mortality of 12.96 per cent., and a gross maternal mortality of 2.88 per cent., which, by deducting the cases in which the death of the child or the mother was not due to us, gave a corrected mortality of 4.32 per cent. and 0.72 per cent. respectively.

In view of the markedly improved results following Cesarean section, the indications for its use should be widened. Thus we find that Zweifel, Olshausen, Reynolds, Bar, Charles, and Cragin have performed 162 operations, with five deaths, a mortality of 3 per cent. We, therefore, believe that in uninfected cases the upper limit for the absolute indication for Cesarean section should be advanced from 5.5 to 7 cm., and the relative indication from 7 or 7.5 to 8.5 for flat, and 9 cm. for generally contracted pelves. With the absolute indication, the operation should be done either at the end of pregnancy or the onset of labor; but when the relative indication is present, the woman should be allowed to go into the second stage of labor, and have bearing down pains for one hour, when if the head does not show signs of moulding or descending, Cesarean section should be performed, instead of forceps upon the movable head or version. So that at present Cesarean section for the relative indication should compete with high forceps or version, instead of with craniotomy upon the living child, as in the past. On the other hand, if the patient be infected, or her surroundings such that an aseptic operation cannot be performed, high forceps or version should be attempted, followed by craniotomy in case one fails to deliver the child by their means, and Cesarean section reserved for those cases in which an absolute indication is present on the part of the pelvis.

The Relative Merits of Bipolar Version with Slow Extraction and Accouchement Force in the Treatment of Placenta Previa.—By DR. HENRY D. FRY, Washington, D.C.

The advantage of bipolar version is the ability to successfully perform it with very little dilation, and with consequently less loss of blood. In placenta previa a fatal result is usually due to hemorrhage or sepsis. The hemorrhage is unavoidable and incident to the dilation of the os, consequently the method requiring the least degree of dilation necessary to perform version will naturally be expected to give the least hemorrhage. After dilation be obtained in sufficient degree to insert several fingers, further continuance of the process by manual means is likely to endanger the integrity of the soft parts. The artificial dilation sufficient to perform bipolar version is comparatively safe, while that necessary for the insertion of the hand and internal version is dangerous. The rapid delivery of the infant in accouchement force adds additional risk of rupture. Fry summarizes the histories of fourteen patients—50 per cent. of whom were primipara. Bipolar version and slow extraction were employed nine times; membranes ruptured and delivery left to nature, one; tampon and natural delivery, one; forceps extraction, four times, including one application to the after-coming head following bipolar version. All of the mothers recovered, and five of the infants were born alive.

Stypticin in Uterine Hemorrhage.

Baldt has an article in the July number of the *Amer. Journal of Obstet.* on this subject. The drug is a hydrochlorate of cotarnine, cotarnine being a derivative of narcotine, one of the alkaloids of opium. When death occurs through its administration, it is produced by paralysis of the respiratory centre. Baldt has found it of service in the following conditions: Profuse and irregular menstruation in virgins.—It should be taken continuously for three or four months, in doses of 0.05 (grammes?) three times daily, except during menstruation, when the dose should be taken at intervals of two or three hours until the flow is diminished. Profuse but not irregular menstruation.—Commence administration four days before the expected flow, and give it as above. Hemorrhage accompanying pelvic inflammation after delivery. Where hemorrhage does not cease after the removal of portions of retained decidua. A typical bleeding during the climacteric period, for which no pathological condition can be found.—A few large doses (two or three grains) should be given. Bleeding from subinvolution during the puerperium. In a few instances of bleeding during pregnancy.—It does not produce uterine contraction. In some cases of endometritis.

Under the following conditions the results of the use of the drug were unsatisfactory: Endometritis fungosa; pains of dysmenorrhea; endometritis associated with chronic metritis, or retro-flexion or version; in hemorrhage from fibro-myomatous tumors.

If a quick action from the drug is wanted, it is best to use the remedy subcutaneously. With antiseptic precaution two to three grains, dissolved in sterile water, should be injected into the buttocks and repeated after four to six hours. Two to three injections usually suffice, after which the remedy may be given by the mouth, either in capsules or in tablets. The doctor has given up to five grains without producing any untoward results.

K. C. M.

OPHTHALMOLOGY AND OTOTOLOGY.

IN CHARGE OF G. STERLING RYERSON, J. T. DUNCAN AND J. O. ORR.

Measles: Complications Involving the Ear and the Eye.

In the *Occidental Medical Times*, A. Barkan remarks that inflammation of the middle ear forms a regular link in the chain of events during an attack of measles. About the third day after the eruption, a discharge is almost always present (if the case is at all severe) in the cavity of the middle ear. This has been shown by *post-mortem* examination of cases at that period. Many of these cases recover without treatment, but in severer cases, not only may rupture of the membrane take place, but extensive disorganization of the parts occurs. This sometimes leads to cerebral complications and death. It is well, then, to know the preventive measures, some of which may be taken in every case where danger is threatened. Barkan puts first the blowing of the nose, "miner's fashion," that is, with one nasal canal always open. Second, the nose and naso-pharynx may be sprayed with Dobell's solution, or listerine (1 to 5). Third, warmth to both body and ear. Fourth, introduce carbolate of glycerine (5 to 10 per cent.) into the external meatus. Fifth, repeated leeching behind the ear and in front of the tragus. In spite of all these measures, however, a prompt and liberal lancing of the membrana tympani may be necessary.

The Eye.—Conjunctivitis is one of the earliest symptoms of measles. This, however, usually passes off without treatment. During the succeeding two or three months, however, various eye troubles are seen, generally produced by the dyscrasia of the measles. The commonest of these are, phlyctenular ophthalmia, inflammation of the cornea, and inflammation of the

lids. These can generally be removed by the simplest treatment. In severer cases, however, optic neuritis may be seen, which may, or may not, lead to blindness.

Blindness Due to Tobacco (*Tobacco Amblyopia*).

It is a well-known fact that ordinary tobacco, either smoked or chewed, may cause great impairment of sight. Many have supposed that tobacco grown in Cuba is comparatively harmless, and, in proof of this, it has been stated that Cubans have no tobacco amblyopia. But C. E. Finlay (*Archives of Ophthalmology*) shows that this is not the case. During a residence of eight years in Havanna, he had ninety-two cases of alcohol and tobacco amblyopia. Some of these cases improved under treatment, others did not, and one acute case went on to total blindness of both eyes.

A Case of Amblyopia Due to Excessive Tea Drinking.

An article by E. W. Henry, in the *Ophthalmic Review* (abstracted in the *Journal of Eye, Ear, and Throat*), shows that strong tea may produce subnormal acuteness of vision. The patient was a man of 57, who did not use tobacco, who drank very little, but who used freely excessively strong tea. He complained of dazzling and mistiness of the eyes, and his vision was reduced nearly one-third. Under treatment and stoppage of the tea, vision improved in three months to normal, the dazzling disappeared, and he had no further trouble.

J. T. D.

PEDIATRICS.

IN CHARGE OF ALLEN BAINES, W. J. GREIG, AND W. B. THISTLE.

Deafness in Children.

Yeanley, in *Pediatrics*, June 1st, 1901, pleads for a proper recognition of the importance of early recognition of ear trouble in children. In young children under three or four, unless it is looked for, partial deafness, even of a considerable degree, is usually unnoticed by the physician, and even if noticed by him, it is hard to make parents believe it. Always see if hearing is impaired during and after an attack of coryza. If adenoids are suspected, examine, and if present, remove if there is any deafness. If left till drum has lost transparency, removal will not improve hearing. This class of case is too frequent. Always treat discharge from ears. It is criminal to tell parents that a child will outgrow deafness or discharge. The earlier the amount of deafness is ascertained, and curability or not determined, the

sooner are we able to place the child in the best position for being educated to the best advantage. In a child under two, close observation is necessary in many instances to determine if deaf or only backward, but it is possible to determine. A child, bright in other ways, who at two years cannot speak, is probably deaf.

Earache in children is of special importance and is greatly neglected. Many a puzzling febrile attack would be explained if the ears were more frequently examined. Ear trouble in children is usually inflammatory. Small babies are particularly hard subjects to spot ear trouble in; hence the necessity of routine examination of ears in obscure febrile attacks. Even mild colds in the head should be treated, and the relief which has been often given by incision of drum membrane in cases of meningitis (?), etc., is familiar to all pediatricists. Loss of weight and elevation of temperature in babies always demands examination of the ear.

Much of the neglect may be explained by the extreme difficulty of obtaining even a glimpse of the drum membrane in young children. Even experts are often at fault. In one case especially I remember there was delirium, very high temperature, vomiting, constipation, rapid respiration, and a good deal of bronchitis. The physician in charge diagnosed pneumonia of both sides, but as in a day or two there was no improvement, a consultant was called in, who decided that the pulmonary signs were not severe enough for pneumonia, and that the trouble was due to teething and the bowel trouble accompanying. Treatment for this was of no avail, and the symptoms were even worse than before, meningitis being now suspected. Evacuation of pus from the ear cleared the whole case up in twenty-four hours.

To properly see the drum membrane in a young child, an anesthetic must be used. It is inconvenient, and the parents will no doubt usually object to such a (to them) wild-goose chase, but if the reason is carefully explained, as a general thing consent is cheerfully given.

C. S. M.

L'Ovo Lecithene.

A summary of an account given by M. Laucereau, at the Academy of Medecine, Paris, June 18th, 1901.—*Gazette des Hopitaux*.

He mentioned that some very interesting works on this subject had been published by various investigators, which showed that egg lecithine has a very marked action on the nerve phenomena governing general nutrition. Proceeding from this point of view, M. Laucereau applied medication by egg lecithine to diverse maladies, where malnutrition was

severe and dangerous. He gave these observations made by him in two patients with pancreatic diabetes, in an advanced stage in each, and who were declining daily in spite of all efforts to relieve them. On giving large doses of egg lecithine (50 centigrammes daily), not only did their emaciation cease, but they gained weight rapidly. Their general condition also improved. He then stated that in every case in which he had used egg lecithine, in patients attacked by various diseases in which malnutrition was severe, the results had been the same, viz., repair of forces and increase in bodily weight.

A young man, of eighteen with osseous tuberculosis, amyloid degeneration of the kidneys, and abundant albuminuria, took egg lecithine for fifteen days, 30 centigrammes a day, his weight increasing 3 kilogrammes.

A child of six years, extremely thin and ill-nourished, coughing and having fever every evening (incipient phthisis), was given egg lecithine for a month (20 centigrammes a day), her weight increasing 2 kilogrammes, and her general state improving very noticeably.

A girl of eight years, with broncho pneumonia, and in a state of considerable emaciation, took 20 centigrammes of egg lecithine daily for a month; 2 kilogrammes gain in bodily weight.

M. Robin made some remarks on the caution necessary in using a food which has the inconvenience of augmenting the quantity of uric acid excreted.

M. Laucereau will direct some researches on this head.

C. S. M.

Saline Injections in Summer Diarrhea.

Saline injections, subcutaneous or per rectum, are extremely useful in severe cases of summer diarrhea, especially where there is much prostration. This is a fact known to every practitioner, and but rarely used, for some reason or another. If used per rectum, flush the bowel thoroughly with the saline solution, using from two to four quarts, according to the child. Enough will remain and be absorbed to be of considerable benefit.

This procedure I have found of great value in cases of extreme marasmus. How frequently it should be employed and in what amounts, will depend on the judgment of the physician. Flushing is not necessary usually, simply the direct injection per rectum of a small quantity of the solution.

C. S. M.

Stimulants for Heat Depression.

In all young children, during the days of depressive heat, vitality is so lowered that many cases of illness will occur unless some means are taken for prevention. In sick infants, in summer, stimulation always suggests itself naturally, but

rarely is it thought of for children who are not visibly ill. Whiskey or Nux Vomica tincture, the latter by preference, should be given in small doses two or three times a day during all the very hot weather. If this were done, it would surprise many to see the effect in lessening the number of restless days and nights, not to speak of the more serious cases of slight or severe indigestion and diarrhea. Also, if the children are on milk diet, the strength must be less by one quarter to one third, the difference in bulk made up by adding water.

C. S. M.

Editorials.

BRITISH CONGRESS ON TUBERCULOSIS.

The British Congress on Tuberculosis for the prevention of consumption was opened by the President, His Royal Highness the Prince of Wales, in the Queen's Hall, London, July 22nd, and closed July 26th. It is said to have been a great success in all respects. Professor Koch created quite a sensation by announcing that his recent experiments had proved that human tuberculosis and bovine tuberculosis were radically different diseases. He had found that cattle could not be affected with human tuberculosis. He acknowledged that the counter-proposition that human beings could not be affected with bovine tuberculosis was more difficult to prove; but, personally, he was satisfied that such was the case.

The following quotation from Osler's recent address on Medicine will give in a few words the views heretofore held by the leaders of the profession. In tuberculosis "the ways of infection are by inhaling the dried sputum of consumptives, drinking infected cow's milk, or eating infected meat." The acceptance of Koch's theory would wipe out the greater part of this. As far as we can learn at the time of writing, from the meagre reports we have received, it was generally considered that Koch had not proved his case, and that much more evidence will have to be produced before his statement can be considered correct.

By many the opinion is freely expressed that Koch should not have made a statement of such importance without further investigation. It is quite possible, if not probable, that his action may do great harm. A writer in the *Toronto Evening News* speaks on this aspect of the question as follows: "But in spite of the dissent of the highest authorities on medical science, it is not difficult to see that Dr. Koch's theory will work much harm by reviving the dispute as to the necessity for the strict inspection of meats and milk, and infusing fresh courage into the dealers who in many cases, and this Province among them, in spite of the fact that medical opinion was then

entirely against them, almost succeeded in defeating the law which places their business under public surveillance. We have only to recall how difficult it was for Toronto to secure from the Legislature the measure providing for the inspection of dairies by a municipal officer, to realize how powerful are the interests which are opposed to some of these sanitary laws. In that contest they had not a single valid argument on their side. If the fight is renewed they will have behind them the opinion of one of the greatest bacteriologists in the world, and it is consequently of the highest importance that that opinion be tested and proved to be absolutely wrong, or absolutely right. So far it rests on a very flimsy foundation."

Further investigations in connection with the subject will be watched with great interest. A strong commission was appointed at the meeting to enquire into the relation between human and bovine tuberculosis.

INCIDENTS OF SUMMER.

A large proportion of our citizens, including children and adults, look forward to summer from year to year with pleasant anticipations. It is the chief holiday season of the year. It unfortunately happens that the whole community, with the pleasure seekers, have to encounter certain dangers. One of the most important of these is that arising from excessive heat. The list of fatalities from this cause in such cities as New York and St. Louis has already been large this year. In our own cities and towns in Canada we have suffered in a similar way in a slight degree.

The excessive heat of the last week of June drove large numbers out of our cities to the ordinary summer resorts. Such travellers have to encounter new dangers in connection with defective sanitation in summer hotels. We have had occasion during the last few years to speak of the great improvement which has taken place in this respect, particularly in the Muskoka district, chiefly through the work of Dr. P. H. Bryce, of Toronto, the Secretary of the Provincial Board of Health. Notwithstanding such improvements certain dangers still exist in some localities. To find this out it is not neces-

sary to go farther than our Toronto Island, where we believe serious dangers exist in some of the crowded portions.

The most strikingly tragic incidents of summer are, however, deaths by drowning. The list of such accidents is deplorably large, and it seems that no amount of precaution is able to make it much smaller. We are glad to notice that nearly all of our children who go to summer watering places nowadays learn to swim—boys and girls alike. One of the dangers not sufficiently recognized is that arising from diving in shallow water. We have had some sad examples of fractured vertebrae and spinal hemorrhages from this cause in Toronto.

We are glad to be able to say that there never was a time when the managers of summer resorts, the health authorities and the parents of children made greater endeavors to guard against the accidents of summer than they have during the last few years.

MEDICAL EXPERT EVIDENCE.

We are much pleased to have the opportunity of publishing in this issue a paper on "Medical Expert Evidence" by E. F. B. Johnston, K.C., Toronto, taken from the *Canada Law Journal*. Mr. Johnston is a distinguished lawyer who has had great experience in trials requiring much evidence from physicians and surgeons. Our readers will find from a perusal of the article (see page 430) that the author treats the subject in a broad way, and is eminently fair to our Canadian medical experts.

We have been told by certain members of the legal profession that neither doctors nor lawyers, as a rule, make good witnesses. It is sometimes difficult to know the meaning of this term. Sometimes the lawyer in search of good medical witnesses wants unscrupulous and dishonest physicians, who are sufficiently clever and plausible to swear for one side and appear to tell the truth. There are fortunately not many of this sort, but Mr. Johnston thinks he may sometimes be found. When found, however, he doesn't last; he cannot long deceive either the judge or the counsel; the two latter can generally manage to prevent him from deceiving even the ordinary stupid jury. The good medical witness, in our opinion, is he

who knows his subject, gives short, plain answers in ordinary English, shows no bias and never attempts to get either clever or smart.

The latter portion of Mr. Johnston's article is worthy of careful consideration. He is anxious to do away with everything like partisanship on the part of medical witnesses, by the appointment of a medical board of witnesses, having the following qualifications: competence, experience and moral standing in the profession.

ANTISEPTIC SURGERY.

There is much difference of opinion as to the best method of preparing the patient and the hands for an operation. The statements of so eminent a surgeon as C. B. Lockwood (*Indian Med. Record*, May 15th) will prove of interest. He does not advise the preparation of the patient the night before. This is done an hour or so before the operation, and in the cases of women and children generally when under the anesthetic. The part is shaved if necessary. It is then thoroughly washed with soap and water to remove dirt, fat and epithelium. The remaining fat is extracted by means of ether, turpentine, or benzine, turpentine being the preferable agent. The skin is then saturated for two minutes with biniodide of mercury in methylated spirit, 1 in 500.

The practice with regard to the hands is to cut the nails short, wash well with soap and water, remove fat with turpentine, and immerse in a bowl of 1 in 500 of biniodide of mercury in methylated spirit.

Instruments are sterilized by being boiled for ten or fifteen minutes in water containing one drachm of washing soda to the pint. They are then wrapped in antiseptic gauze and placed in a solution of carbolic acid, 1 in 60.

Silk is made sterile by boiling for twenty minutes in water. No chemical should be used. It is then placed in a jar containing 1 in 20 carbolic acid. Fine silk may be freely buried. In most cases the thicker silk can be buried to a moderate extent. It is of importance to note that silk should never be employed to secure a septic structure, as the pedicle of an

inflamed appendix. In such a case the bacteria in the tissue are liable to cause the silk to be thrown and give rise to suppuration.

Catgut can be made perfectly safe by scrubbing it well on a board with soap and water. It is then put in ether for twenty-four hours. Next it is soaked for seventy-two hours in a watery solution of biniodide of mercury of the strength of 1 part in 250. It may be kept in this solution indefinitely and retains its strength for many months.

ETIOLOGY OF GENERAL PARALYSIS.

General paralysis, like most diseases, has been the subject of close study for many years. It attacks, as a rule, those of a bright mental disposition, it is very fatal and progressive in its course, and its pathology has been one of the *terra incognita* of medical science. Dr. Lewis C. Bruce, the Superintendent of Perth Asylum, in the *British Medical Journal* for 29th June, advances the opinion that the disease is of toxic origin. This ground has been taken for some time, but along the line that the toxic condition was due to syphilis. Dr. Bruce does not take this ground. He argues that general paralysis is caused by a gastro-intestinal intoxication. His position is that bacteria of different kinds, but mainly the bacillus coli, attack the system through the mucous membrane of the digestive canal. He contends that serum obtained from a patient in a state of remission, and injected into cases in their early stage, point to this as the proper line of treatment.

CANADIAN MEDICAL ASSOCIATION.—WINNIPEG MEETING.

Last time of warning! The Winnipeg meeting will be held August 28th to 31st, 1901. For months the officers of the Association, and especially the local committee, have been doing good work in the interests of this meeting. Already quite a sufficient number of papers have been promised by able physicians of Canada and the United States to ensure success

from a scientific standpoint. Apart from that feature, however, there is a certain amount of sentiment which will have influence with many. The Canadian Medical Association is a national concern, in which we take some (though not quite enough) pride, and to which we should ever extend a loyal support. The Winnipeggers, the Manitobans, the North-Westerners, and the far Westerners are all taking a deep interest in this meeting, and want to see the Easterners turn out in force. No matter how great the crowd may be, we understand there will be plenty of room in the prairies for the whole Winnipeg overflow, and all will receive a warm welcome. A third feature is the fact that Winnipeg, Manitoba, and the whole (once) Wild and Woolly West are well worthy of a visit. The advice, already given many times, to spend your holiday this year by taking such a trip, is all right. Our readers are invited to appear in Winnipeg on the morning of August 28th.

The following is a list of some of the papers already promised :—

The Address in Medicine—J. R. Jones, Winnipeg.

The Address in Surgery—O. M. Jones, Victoria.

The Address in Gynecology—Thomas S. Cullen, John Hopkins, Baltimore.

The Early Diagnosis and Treatment of Pulmonary Tuberculosis—D. Gilbert Gordon, Toronto.

The Nose and Throat in General Practice—John Hunter, Toronto.

Remarks on Some Interesting Diseases of the Age—G. H. Burnham, Toronto.

Orthopedic Treatment of Deformities and Disabilities Resulting from Paralysis—B. E. McKenzie, Toronto.

Title to be announced—D. J. Gibb Wishart, Toronto.

A Practical Way of Distinguishing Between the Human and Animal Blood—G. Silverthorne, Toronto.

Infectious Pneumonia—W. S. Muir, Truro, N.S.

Sclerotic Ovaries—A. L. Smith, Montreal.

Removal of Large Tumor from Os Uteri After Labor Had Set in—A. Armstrong, Arnprior.

Tuberculosis in Milk—Prof. Russell, University of Wisconsin.

The Present Outbreak of Smallpox in America—H. M. Bracken, Health Officer, Minnesota.

Hematology of the Blood—L. H. Warner, New York.

Skin Diseases; Lantern Demonstration—F. I. Shepherd, Montreal.

The Treatment of Consumption in Special Institutions—Dr. Richer, Montreal.

Disposal of Tuberculous Sputum—J. H. Elliott, Gravenhurst.

Title to be announced - G. Chambers, Toronto.

Chronic Ulceration of the Stomach Simulating Cancerous Disease; Relation of a Case of Gastro-enterostomy With Murphy Button; Recovery—J. F. W. Ross, Toronto.

Report of Cases Treated With the Hot Air Bath—W. H. Peplar, Toronto.

The Development of the Race—J. N. Hutchison, Winnipeg.

Some Forms of Gastric Hyperacidity and Their Treatment—C. F. Martin, Montreal.

Syphilis as Seen by the Ophthalmic Surgeon—F. Buller, Montreal.

On the Necessity of a Better Recognition and Isolation of Trachomatous Patients in Canada—W. Gordon M. Byers, Montreal.

Title to be announced—J. L. Bray, Chatham, Ont.

Epidemic Cerebro Spinal Meningitis; a History of Some Cases—James McKenty, Gretna, Man.

Pulmonary Tuberculosis, its Treatment and Prevention—A. P. Proctor, Kamloops, B.C.

Mild Smallpox—G. A. Kennedy, Macleod, Alta.

Title to be announced—C. J. Fagan, Victoria, B.C.

Hyperchlorhydria—A. J. Macdonell, Winnipeg.

The Question of Medical Defence—Russell Thomas, Lennoxville, P.Q.

Title to be announced—F. F. Westbrook, University of Minnesota.

Surgical Treatment of Cancer—Sir William Hingston, Montreal.

Further particulars furnished by the Committee of Arrangements.

The Canadian Pacific Railway have issued a circular giving very thorough information regarding the necessary preliminaries to secure the return trip to Winnipeg for single fare, also regarding side trips from Winnipeg. We are reprinting a large portion of the circular for the information of those who may not receive a circular.

How to Get There.—Purchase a ticket for Winnipeg from the agent at the place of departure, and get from him a standard certificate (which is a receipt for one full single fare). When registering at the meeting, leave the certificate with the Treasurer, and it will be returned, signed by the Secretary, on the morning of August 30th.

This certificate, when presented to the station agent at Winnipeg, will entitle bearer to a return ticket to his destination

free of charge, if the route to Winnipeg has been via all rail, and the member desires to return by the same route.

Particulars.—If the route to Winnipeg has been via all rail, a ticket to return by the Lake route will be issued on payment of \$4.25.

If the route to Winnipeg has been via the Lake route, a ticket to return by the same route will be issued on payment of \$8.50; or, having gone by the Lake route, it is desired to return via rail, a ticket will be issued on payment of \$4.25. (Via the Lake route the rate includes meals and berth.)

Side Trips After the Meeting.—Tickets to points in Manitoba, the Canadian North-West, the Kootenay District, Banff, Glacier, etc., and the Pacific Coast points, will be issued to delegates at the one-way first-class limited rate for the round trip.

The rates are good going August 20th to 28th, and returning until September 30th, 1901, and include the member or delegate, his wife and daughters. Members travelling by the Lake route should secure berths at an early date from W. Maughan, City Passenger Agent, C.P.R., Toronto.

Hotel Accommodation.—The Clarendon, \$2.00 to \$3.50 per day; The Leland, \$2.00 to \$3.50; The Queen's, \$1.50 to \$2.50; The Winnipeg, \$1.00; The Brunswick, \$1.00; The Seymour, \$1.00; The Vendome, \$1.00; The Imperial, \$1.00.

Members desiring to obtain accommodation in advance should communicate with Dr. James Patterson, Winnipeg.

The Portage avenue car runs from the C.P.R. station to the Y.M.C.A. Building (the place of meeting); all other cars running on Main street will give transfers at the corner of Main and Portage avenue.

On Saturday, August 31st, there will be a free excursion through the finest wheat-growing sections of the Province of Manitoba. The train will pass through such important places as Portage la Prairie, Carberry, Brandon, Souris, Glenboro', Holland, and Treherne. The trip out and back will be by two different lines of railway, thus giving the delegates an excellent opportunity of seeing the country in its various aspects.

The General Secretary has received a letter from Dr. A. S. McCaig, of Sault Ste. Marie, on behalf of the medical men of that place extending an invitation to members of the Association from eastern points to stop over a day and a night at the Soo as guests of the medical men there.

The Soo is a growing place and alive with industry, so that

any who can will be wise to accept this kindly hospitality and spend a most pleasant day and an evening's entertainment there.

Members intending to do this should communicate at once with Dr. McCaig.

The British Columbia Medical Association will hold the annual meeting in Victoria on the 5th and 6th of September. The original date was in August, but it was changed to coincide with the arrival on the coast of the excursion from the Canadian Medical Association leaving Winnipeg about September 1st. The profession of the coast extend a cordial invitation to all eastern brethren to attend and join in the discussions and partake of their hospitality.

Medical Council Examiners for 1901-2: Dr. H. B. Anderson, Toronto, Anatomy, descriptive; Dr. W. G. Anglin, Kingston, Theory and Practice of Medicine; Dr. R. N. Horton, Brockville, Midwifery; Dr. A. Primrose, Toronto, Physiology and Histology; Dr. J. W. Edgar, Hamilton, Surgery; Dr. W. Gunn, Clinton, Medical and Surgical Anatomy; Dr. Graham Chambers, Toronto, Chemistry and Toxicology; Dr. J. W. Schooly, Welland, Materia Medica and Pharmacy; Dr. J. H. McLellan, London, Assistant Examiner to the Examiner on Surgery and Diseases of Women; Dr. A. Haig, Kingston, Assistant Examiner to the Examiner on Medicine and Diseases of Children; Dr. G. H. Field, Cobourg, Second Assistant Examiner to the Examiner on Medicine, Pathology, Therapeutics and Bacteriology; Dr. E. T. Adams, Toronto, Homeopathic Examiner.

A Presentation to Dr. J. Ferguson.

The Sons of Scotland presented Dr. John Ferguson with a handsome silver service, July 2nd, at a meeting held in the Temple Building. The accompanying address had the following concluding words: "The Grand Camp now places in your hand these few pieces of plate, in the sincere hope that they may prove a token to you and your family of the confidence which your fellow-countrymen of the Sons of Scotland have in your distinguished abilities and sound judgment, as well as of the

high esteem in which you are personally held." Dr. Ferguson made a suitable reply, from which we extract the following: "Why a Scotch National Society in this country? In the Scottish character there is the highest development of the patriotic sentiment, the finest vein of sympathy, the strongest love of permanency, the purest form of religious thought, the sweetest type of family life, the keenest appreciation of learning, the deepest pathos, the richest humor, the greatest courage. Transfuse these into our own, the society's, and the nation's life. By cherishing all that is good in Scotland we will elevate the standard of our country. We will not be less Canadian by being more Scottish. To love Canada as our forefathers loved Scotland, to fight for Canada as our forefathers fought for Scotland, to die for liberty as our forefathers died for liberty, to sing as our forefathers sang, to think as our forefathers thought, to stand together as our forefathers stood together, will bode no evil to the land of the Maple Leaf, nor the Sons of Scotland."

EXAMINATION OF COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO.

The following candidates passed the final examination:—W. J. Abbott, Brockville; D. M. Anderson, Toronto; F. W. Birkett, Ottawa; W. T. Burns, Toronto; E. L. Brown, Chester-ville; C. T. Bowles, Ottawa; A. Bourque, St. Eugene; F. A. Clarkson, Toronto; H. L. Collins, Kincardine; A. C. Campbell, St. Thomas; H. E. Clutterbuck, Toronto; C. J. Currie, Toronto; E. N. Coutts, Durham; W. R. Cook, Fordwich; B. A. Cohoe, Toronto; W. H. Cronyn, London; F. A. Cleland, Meaford; A. Chevrier, Ottawa; H. G. Downing, Woodstock; H. Dittrick, St. Catharines; I. Dixon, Walkerton; D. R. Dunlop, Fordwich; C. C. Elliott, London; J. W. Edwards, Kingston; E. Flath, Toronto; J. I. Ferguson, London; J. W. Fitzgerald, Sanborn; C. C. Grant, St. Thomas; H. S. Hutchison, Toronto; V. A. Hart, Dalston; D. C. Jones, Brockville; W. B. Cayler, Toronto; T. W. Kirby, Sault Ste. Marie; F. E. McLoughlin, Hamilton; A. K. Morgan, Adelaide; A. H. Montgomery, Brantford; A. J. G. MacDougall, Toronto; W. G. Montgomery, Wroxeter; J. E. Martin, Langton; F. W. Marlow, Blackstock; M. D. McKichan, Hamilton; W. F. McKay, Beaverton, Miss Minnie McDonald, Hagersville; A. F. McLaren, Lancaster; P. W. O'Brien, Toronto;

J. M. Potts, Sterling; H. E. Paul, Newburg; A. R. Perry, Mount Forest; C. T. Pigot, London; A. W. Richardson, Kingston; R. M. Rutherford, Hawkesbury; E. S. Ryerson, Toronto; H. P. Ross, Exeter; E. J. Stubbs, Stratford; W. E. Storey, Windsor; G. B. Snyder, Ridgeway; G. S. Sadler, Pakenham; H. Softley, Feversham; J. H. Trout, Toronto; C. C. Tatham, Listowel; W. G. Tyner, Kingston; C. L. Taylor, Wardsville; S. Thompson, Strathroy; F. C. Trebilcock, Enniskillen; J. P. F. Williams, Georgetown; J. Webb, Hamilton.

INTERMEDIATE.

The following candidates passed the intermediate examination:—W. J. Abbott, Brockville; D. M. Anderson, Toronto; J. W. Atkinson, Avon; W. T. Burns, Toronto; W. J. Brown, Lindsay; J. G. Bogart, Kingston; C. T. Bowles, Ottawa; A. Bourque, St. Eugene; F. W. Birkett, Ottawa; A. C. Campbell, St. Thomas; C. J. Currie, Toronto; J. B. Coleridge, Ingersoll; O. W. Colbeck, Toronto Junction; C. C. Campbell, Listowel; W. A. Cerswell, Bond Head; W. R. Cook, Fordwich; R. H. Carscadden, Morewood; F. J. Colling, Toronto; F. J. Carrharris, Kingston; B. A. Cohoe, Toronto; W. H. Cronyn, London; F. A. Cleland, Meaford; A. Chevrier, Ottawa; F. P. Coates, Streetsville; H. E. Clutterbuck, Toronto; J. T. Dixon, Hamilton; G. Davis, Cayuga; J. E. Drury, Dalston; I. Dixon, Walkerton; C. R. Elliott, Alvinston; J. W. Edwards, Kingston; W. C. Fawcett, London; C. D. Ferguson, Port Stanley; J. I. Ferguson, London; T. S. Genge, Halleford; W. S. Grimshaw, Kingston; A. J. Grant, London; H. S. Hutchison, Toronto; John Herod, Toronto; W. T. Hamilton, Motherwell; V. A. Hart, Dalston; R. J. Kee, Stanley Mills; D. C. Jones, Brockville; W. H. Lowry, Guelph; C. P. Lusk, Toronto; D. R. Lonsborough, Seaforth; A. H. Montgomery, Brantford; A. J. G. MacDougall, Toronto; W. C. Montgomery, Wroxeter; K. MacKinnon, Guelph; R. T. MacLaren, Columbus; A. D. MacIntyre, Glencoe; G. E. R. McCartney, Binbrook; M. D. McKichan, Hamilton; G. D. McIlwraith, Hamilton; W. McIntyre, Rosedale; J. McCulloch, Port Perry; W. F. McKay, Beaverton; J. A. McCollum, Toronto; Minnie McDonald, Hagersville; W. B. McDiarmid, Maxville; L. McLeay, Gravenhurst; J. M. Oswald, Windsor; R. N. Parent, Windsor; R. Parsons, Emery; G. R. Pirie, Hamilton; H. E. Paul, Newburgh; A. Rannay, Georgetown; A. B. Rutherford, Owen Sound; E. Richardson, Brockville; C. H. Reason, London; J. Rogers, Belmont; A. W. Richardson, Kingston; R. M. Rutherford, Hawkesbury; W. C. Redmond, Bethel; W. E. Storey, Windsor; G. W. Smith, Almonte; J. A. Smith, Hamilton; J. Smillie, Bluevale; A. T. Steele, Orangeville; R.

D. Sproat, Milton; G. S. Sadler, Pakenham; A. Turner, Southwold; J. H. Trout, Toronto; C. C. Tatham, Listowel; W. G. Tynner, Kingston; D. G. Whealey, Toronto; C. S. Wainwright, Orillia; L. N. Whitely, Londesboro'.

UNIVERSITY OF TORONTO.—RESULTS OF FINAL EXAMINATION.

First-Class Honors.—F. A. Clarkson, G. E. R. McCartney, J. T. Dixon.

Second-Class Honors—B. A. Cohoe, D. G. McIlwraith, J. A. McCollum, M. D. McKichan, F. A. Cleland, W. H. Cronyn, G. W. Smith, A. T. Steele, A. H. Montgomery, W. E. Storey, J. A. Campbell, F. J. Colling, C. J. Currie, W. A. Cerswell.

Pass.—W. J. Abbott, C. C. Campbell, J. D. Chisholm, *H. A. Christie, *T. A. Davies, I. Dixon, C. D. Ferguson, W. T. Hamilton, R. J. Kee, *R. W. Leader, D. S. Lighthall, J. W. Moak, C. S. Morton, W. McIntyre, K. McKinnon, P. W. O'Brien, H. R. Parent, J. F. S. Riches, A. B. Rutherford, J. A. Smith, J. D. Stanley, C. E. Treble, C. S. Wainwright, *C. A. A. Warren, D. G. Whaley, L. N. Whitley, A. E. Wickens.

*The following are required to pass supplemental examinations before completing the final examination :

Medicine.—H. A. Christie, T. A. Davies, C. A. A. Warren.

Surgery.—T. A. Davies.

Obstetrics.—H. A. Christie, T. A. Davies, R. W. Leader, C. A. A. Warren.

Therapeutics.—T. A. Davies, R. W. Leader, C. A. A. Warren.

Jurisprudence.—R. W. Leader.

Degree of Doctor of Medicine.—Beverley Drake Harison, Helen MacMurchy, William Edgar Robertson, William Charles White.

McGILL UNIVERSITY.—MEDICAL FACULTY.

At the recent Convocation the following received the Degree of M.D., C.M.:—T. F. Bayfield, E. R. Belanger, J. J. Blake, J. G. Browne, B.A., J. Bruce, B.A., P. E. Butler, R. P. Campbell, B.A., D. A. Carlyle, C. Cartwright, H. W. Coates, H. McN. Collison, J. Collison, F. W. Crang, C. H. Dalton, A. S. Donaldson, J. W. Duncan, W. J. Eagan, R. L. Ellis, J. E. Fleming, A. T. Fuller, B.A., R. L. Gardner, B.A., J. D. George, J. R. Goodall, B.A., R. J. O. Harley, J. T. Hope, A. C. P. Howard, B.A., E. N. McL. Hunter, G. F. Jackson, R. DeL. Johnston, B.A., A. Johnston, J. L. Johnston, J. H. Jones, Sydney Jones, B.A., A. L. Kendall,

R. H. Ker, B.A., F. E. Lawlor, G. E. Learmonth, B.A., T. H. Leggett, H. M. Little, B.A., T. H. Lunney, D. S. Mackay, M. Mackay, B.A., S. D. Mackenzie, J. W. L. Macneil, C. Macpherson, C. A. McDonald, E. E. McDonald, E. A. Martin, W. A. Meighen, S. Millar, G. H. S. Miller, J. C. Moore, D.V.S., A. D. Morgan, E. J. Mullaly, W. E. Newcombe, J. K. Niven, M. T. O'Sullivan, A. Patterson, B.A., E. Penner, B.A., H. Pittis, L. H. Redon, B.A., B. A. Richards, J. Roberts, C. G. Robertson, L. F. Robertson, B.A., R. D. Robertson, L. E. Robidoux, B.A., H. B. Rogers, C. K. Russel, B.A., E. M. Russell, C. A. Rutherford, W. T. Ryan, B.A., C. W. Sanders, C. Shearer, R. L. Shearer, A. S. Simpson, E. G. W. Simpson, B.A., A. E. W. Snyder, G. L. Stentafor, J. Stevenson, B.A., C. L. Stewart, C. A. Stewart, D. A. Taylor, W. L. Taylor, J. A. Ward, E. H. White, B.A., W. L. Wiggin, B. E. Wiley, W. Williams, L. B. B. Wilmot, J. J. Wilson, D. E. Winter, H. B. Wyman, B.A.

Personals.

Dr. A. C. Hendrick has commenced practice in Toronto.

Dr. Clouse, of Toronto, returned from Buffalo July 16th.

Dr. Charles Temple spent a portion of July on the Georgian Bay.

Dr. Geo. A. Bingham and wife are spending their vacation abroad.

Dr. R. A. Stevenson, of Toronto, left home on July 29th for England.

Dr. I. L. Palmer, of College street, has left for England on a short visit.

Dr. Wm. Britton, of Toronto, spent the greater part of July in Muskoka.

Dr. Wm. A. Sargent, of Springbrook, Hastings County, went to Europe early in July.

Dr. Marlow, late House Staff, St. Michael's Hospital, is practising with Dr. N. A. Powell.

Dr. Montizambert, of Ottawa, attended the London Tuberculosis Congress, July 22nd.

Dr. Fred Grasett, of Toronto, left his home July 17th to spend a holiday with his family.

Dr. George Baptie, of Ottawa, has been appointed Associate Coroner for the County of Carleton.

Dr. J. Frank McConnell, Las Cruces, N. M., is spending his holidays with his parents in Toronto.

Dr. G. W. Howland is now taking a holiday on the Georgian Bay. He will go to England shortly.

Dr. Leask, late House Staff, St. Michael's Hospital, is practising on the Canada Central Railroad.

Dr. J. Arthur Sutherland, of Dawson City, was married on July 8th to Miss Nora Gricel, of Seattle.

Dr. J. Gow has been appointed resident physician, Mount Airy Children's Hospital, near Baltimore.

Dr. G. H. Maclaren is now in Scotland. He expects to spend some time at post-graduate work in Europe.

Dr. John L. Davison, of Toronto, left for Tadenac, Georgian Bay, on July 19th, where he will remain one month.

Dr. R. V. Fowler, formerly of Colborne, now practising in Perth, has recovered from a somewhat severe illness.

Dr. Bertram Spencer left Toronto July 24th for Balsam Lake, where he will spend a portion of his holidays.

Dr. E. D. Carder has been appointed surgeon to one of the C. P. R. steamers running between Vancouver and Japan.

Dr. Alex. Primrose returned to Toronto July 29th, after spending a month in the Maritime Provinces. He delivered the address in Surgery at the meeting of the Maritime Medical Association in Halifax, July 3rd and 4th.

Dr. Hutchinson, of Montreal, paid a visit to Dr. Bruce Rioridan, of Toronto. The two doctors left Toronto July 11th to do the Pan-American.

Dr. Wm. Oldright, of Toronto, is spending the summer at Muskoka. During his absence Dr. A. J. MacKenzie is taking charge of his practice.

Dr. Francis C. Mewburn, of Toronto, celebrated his sixtieth anniversary of his wedding day, July 25th. He received his license to practise in 1838.

Prof. Osler, of Baltimore, went to England early in June. After a short stay in London he went to the Continent, but returned for the Tuberculosis Congress, July 22nd.

Dr. Graham Chambers has been appointed Professor of Dermatology and Assistant Professor of Clinical Medicine at the Women's Medical College. He spent a portion of the month of June *doing* the hospitals of New York, and a portion of the month of July holidaying in Muskoka.

Dr. P. A. Gillespie, formerly of Toronto Junction, now of Winburg, South Africa, was recently presented with a medal and clasp, and was also granted a bounty for his loyal services to the British Crown during the war.

Dr. D. J. Gibb Wishart, of Toronto, left on July 30th to visit first the Gravenhurst Sanatorium, and then Go Home Bay, Georgian Bay. Before returning he will go to Winnipeg to attend the meeting of the Canadian Medical Association.

Dr. H. R. Woolbert, Major in the Indian Medical Service, visited Toronto, July 13th, and was the guest of Dr. Charles O'Reilly. Major Woolbert has charge of a large district in India, which contains 22 dispensaries, and a prison with 500 prisoners.

Dr. F. C. Macdonald, of Scarboro, Ont., who was appointed to the staff of Civil Surgeons of the South Africa Field Force in December, has returned to Canada with the Canadian Scouts. He reached Quebec July 29th, and Toronto, July 31st, going on the same day to Scarboro.

The following physicians of Toronto went to Niagara Falls, via St. Catharines, July 17th, on the invitation of the owners of the new electric railway which has recently been extended to a point above the Falls: Drs. Jas. Thorburn, Chas. O'Reilly, J. E. Elliott, Bruce Riordan, Geoffrey Boyd.

Obituary.

WM. IRVING, M.B.—Dr. Irving, of St. Mary's, died at his home, June 20th. He was educated in Trinity Medical College, and graduated, M.B. Trinity University, in 1874. After graduating, he practised for a short time on Yonge Street, near Toronto. He soon went to Exeter, thence to Kirkton, and finally settled in St. Mary's in 1893.

EDWARD AARON GRAVELY, M.C.P.S.O.—Dr. Gravelly, of Cornwall, died June 17th.

JOHN GRANT, M.R.C.S.ENG.—Dr. J. Grant, of Napanee, died suddenly at his home in the latter part of June. He had been practising about forty years.

Book Reviews.

Essentials of the Diseases of Children. By WILLIAM M. POWELL, M.D. Third edition. Thoroughly revised by ALFRED HAND, JR., Dispensary Physician and Pathologist to the Children's Hospital, Philadelphia. 12mo, 259 pages. Philadelphia and London: W. B. Saunders & Company. Price, \$1.00 net. Canadian Agents: J. A. Carveth & Co., Toronto.

In this revised edition numerous additions and changes have been made. The section on infectious diseases has been rewritten, as well as many of the paragraphs on pathology. A number of new chapters have been added, among others one on infant feeding. It will be found a very good book both for students and practitioners. As the author announces, the substance matter has been taken chiefly from the works of Eustace Smith, Lewis Smith, Goodhart, Starr, and Meigs & Pepper.

The Care of the Baby. A Manual for Mothers and Nurses, containing Practical Directions for the Management of Infancy and Childhood in Health and in Disease. By J. P. CROZER GRIFFITH, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania, Philadelphia. Second revised edition. 12mo, 404 pages, with 67 illustrations in the text and 5 plates. Philadelphia: W. B. Saunders & Co., 925 Walnut Street. 1898. Price, \$1.50 net. Canadian Agents: J. A. Carveth & Co., Toronto.

Dr. Griffith has written one of the best books on this subject that has yet appeared. In his second edition he has enlarged the work considerably, and with his usual painstaking and careful precision has submitted it to a complete revision. The book is a very practical one, and covers thoroughly what it undertakes to do on its title-page. The author lays down clearly the lines that the parent or nurse must follow in the care of the child with safety, and without usurpation of the place of the physician. A dissemination of the knowledge contained in the book would often lead to medical consultation in instances in which it is now neglected through ignorance or indifference. The book is altogether a useful and most commendable one, not alone for mothers and nurses, but for medical students and practitioners as well.

The Pathology and Treatment of Sexual Impotence. By VICTOR G. VECKI, M.D. From the second German edition, revised and enlarged. Demy 8vo, 291 pages. Philadelphia: W. B. Saunders & Co., 925 Walnut Street. 1899. Price, \$2.00 net. Canadian Agents: J. A. Carveth & Co., Toronto.

The work deals systematically and in detail with the anatomy of the male genital organs and the physiology of the sexual act. The author then discusses the etiology of impotence and

its forms, which he subdivides into five classes, viz.: 1. That due to congenital malformation and defects of the sexual organs. 2. That due to acquired defects. 3. Consecutive impotence. 4. That due to inherited predisposition. 5. Neurasthenic impotence. The diagnosis, prognosis and prophylaxis are next treated of in separate chapters, and finally the subject of treatment is dealt with in a most exhaustive manner in all its phases. This section is especially "up-to-date."

In conclusion, will say that the volume before us deals very ably with one of the most important subjects connected with our social and our pathological existence; and that, accordingly, its contents should be mastered by every conscientious medical practitioner.

A Clinical Text-Book on Medical Diagnosis for Physicians and Students. Based on the Most Recent Methods of Examination. By DR. OSWALD VIERORDT, Professor of Medicine at the University of Heidelberg. Authorized translations, with additions, by FRANCIS H. STUART, A.M., M.D., of New York, from the fifth enlarged German edition. Royal 8vo, 603 pages and 194 wood cuts, many of them in colors. Philadelphia: W. B. Saunders & Co. 1898. Price, cloth, \$4.00 net; sheep or half morocco, \$5.00 net. Canadian Agents: J. A. Carveth & Co., Toronto.

The fact that five editions of this work have been called for in nine years is sufficient proof that the efforts of the authors have met with the success which they deserved. The author writes with particular clearness on the examination of the respiratory apparatus. It is very difficult to express in words the pathological sounds and signs which are encountered in percussing and auscultating the chest, but a careful study of Dr. Vierordt's remarks will greatly aid the student in understanding the alterations from the normal in both methods of procedure.

The chapter on the examination of the circulatory apparatus contains a vast amount of information; the description of the variations in the rhythm and character of the heart sounds is facilitated by some simple diagrams. The modern requirements of the examination of the digestive apparatus are met by full directions as to the chemical and microscopical analysis of the digestive juices.

The chapter on the examination of the urinary apparatus is also marked by the judgment exercised on the selection of the chemical processes required.

The directions for the examination of the nervous system form one of the best chapters in the book, especially that part of it which deals with electrical tests.

The work will hold its place as one of the most valuable and creditable treatises of its kind, and is in every way worthy of the success it has attained.

An American Text-Book of Gynecology, Medical and Surgical, for Practitioners and Students. By ten of the leading Gynecologists of America. Edited by J. M. BALDY, M.D., Professor of Gynecology in the Philadelphia Polyclinic. Imperial octavo of 718 pages, 341 illustrations in the text and 38 colored and half-tone plates. Second edition, revised. Philadelphia: W. B. Saunders & Co., 925 Walnut Street. 1898. Price, cloth, \$6.00 net; sheep or half-morocco, \$7.00 net. Canadian Agents: J. A. Carveth & Co., Toronto.

The system of American text-books has attracted the favorable commendation of the medical world from the appearance of the first volume to the present time. The second edition of this magnificent work of Dr. Baldy's is a great improvement upon its predecessor in many respects. A number of new figures have been added and old ones cut out. Amongst the latter we are glad to see that nearly all the figures of instruments have been eliminated. The new figures are all good and clear, especially those illustrating abdominal hysterectomy and vaginal hysterectomy with the use of clamps. Amongst other new and revised matter we notice a description of Freund's and Baldy's operations for the treatment of prolapse of the uterus. The section upon Diseases of the Bladder and Urethra has been practically re-written, and the whole book bears evidence of careful revision. The list of authors remains the same as in the first edition. The book is altogether a most valuable one, and will be especially useful to the student, inasmuch as it contains a large amount of information upon special points in the teaching of gynecological operations, which are not to be found in the ordinary text-books on this subject. It is a clearly-written, up-to-date, and safe, practical guide in the treatment of the diseases of women.

Diseases of the Intestines. By DR. I. BOAS, Specialist for Gastro-Intestinal Diseases in Berlin. Authorized translation from the first German edition, with special additions by SEYMOUR BASCH, M.D., New York City. With 47 illustrations, 560 pages, 8vo. Cloth, \$5.00; sheep, \$6.00. New York: D. Appleton & Co., Publishers, 72 Fifth Avenue.

We have before us in the present volume a work that should be in the hands of all practitioners. It deals with a subject that is of the greatest interest to the general practitioner. The distinguished author devotes his attention entirely to diseases of the gastro-intestinal canal, and is an undoubted authority on this subject. In the present volume the alimentary tract below the stomach is solely dealt with. The anatomy and physiology of the intestines is most completely analyzed in the first fifty pages.

It is the first work that has appeared in the English language that deals entirely with the diseases of the intestinal tract. When we remember how important are the functions of the intestines, and how dependent every other function of the

body is upon the healthy action of the intestines, we can readily see how essential a thorough knowledge of its functions are. In all systems of medicine the intestinal diseases are too curtly disposed of. The distinguished author has elaborated at the end of each chapter a complete reference index to both the author quoted and the article referred to. This is a great boon to the investigator, who can not only corroborate the fact, but can also read the whole article and glean much from the context. The subject of treatment occupies a most prominent part in the work, and in this feature we recognize a most important fact. Treatment is of the utmost importance, and too often we find everything else but treatment elaborately set out, while the most important part is dismissed with a line or two. This is not the condition found in the present work. Dr. Boas believes that the surgeon and physician should work together, and that the physician should be the one to advise as to the necessity of operative interference. We concur in this idea, and while operation may be the result of consultation, yet the physician should be the one to point out its necessity early enough to be of benefit to the patient and not cast discredit on the operation or operator. We can heartily recommend this work to the attention of the profession, feeling satisfied that it will be of the greatest service. The publishers have spared no pains in making it a most attractive volume.

A Manual of Physiology, with Practical Exercises. By G. N. STEWART, M.D., D.Sc., M.D. (Edin.), D.P.H. (Camb.), Professor of Physiology in the Western Reserve University, Cleveland. With 894 pages, 336 illustrations and 5 colored plates. Fourth edition. Philadelphia: W. B. Saunders & Co., 925 Walnut Street. Price, \$3.75 net. Canadian Agents: J. A. Carveth & Co., Toronto.

The third edition of this manual shows numerous alterations in the text, while a great many experiments have been added in the practical exercises. The book is splendidly arranged, and shows the tendency in the teaching of this subject at the present time. One might as well teach anatomy or chemistry without practical work as to give instruction in physiology without practical exercises.

The subject is presented in an unusually attractive, clear, and forcible way, and the practical experiments are arranged so as to make the matter of the text clear and impressive. The text is very well suited for the medical student, as it does not go too much into details, and yet presents the subject completely. Altogether the book is an excellent one, and the best we have seen for students' purposes. It will also be almost as useful to the practitioner, being concise and complete, and at

the same time abreast of the times, containing the results of the progress made in this branch of recent years.

In conclusion, we will say that the author is a good teacher, and knows how to impart the knowledge possessed by him to others in a way that makes a dry subject interesting and easily understood. This is an art of the highest order, and invaluable in a work of this character.

The Hygiene of Transmissible Diseases: their Causation, Modes of Dissemination and Methods of Prevention. By A. C. ABBOTT, M.D., Professor of Hygiene and Bacteriology, University of Pennsylvania. Third edition, revised and enlarged. Octavo, 351 pages, with numerous illustrations. Philadelphia and London: W. B. Saunders & Company. Cloth, \$2.50 net. Canadian agents: J. A. Carveth & Co., Parliament Street, Toronto, Ont.

During the interval that has elapsed since the appearance of the first edition, investigations upon the modes of dissemination of certain of the specific infections have been conspicuously active, and through them much new light has been shed and many novel suggestions have been made; especially is this the case with regard to the roles of insects and rodents as disseminating factors. Wherever practicable, these views have been embodied and discussed. The sections especially on Malaria, Yellow Fever, Plague, Filariasis, Dysentery and Tuberculosis have been both revised and enlarged.

A Text-Book of the Practice of Medicine. By DR. HERMAN EICHHORST, Professor of Special Pathology and Therapeutics and Director of the Medical Clinic in the University of Zurich. Translated and edited by AUGUSTUS A. ESHNER, M.D., Professor of Clinical Medicine in the Philadelphia Polyclinic. Two octavo volumes of over 600 pages each; over 150 illustrations. Philadelphia and London: W. B. Saunders & Co. 1901. Price per set: cloth, \$6.00 net. Canadian agents: J. A. Carveth & Co., Toronto, Ont.

The Germans lead the world in internal medicine, and among all German clinicians no name is more renowned than that of the author of this work. Dr. Eichhorst stands to-day among the most eminent authorities of the world, and his Text-Book of the Practice of Medicine is probably the most valuable work of its size on the subject. The book is a new one, but on its publication it sprang into immediate popularity and is now one of the leading text-books in Germany. It is practically a condensed edition of the author's great work on Special Pathology and Therapeutics, and it forms not only an ideal text-book for students, but a practical guide of unusual value to the practising physician. As the essential aim of the physician will always be the cure of disease, the fullest and most careful consideration has been given to treatment.

Obstetrics and Gynecologic Nursing. By EDWARD P. DAVIS, A.M., M.D., Professor of Obstetrics in the Jefferson Medical College. Philadelphia, etc., etc. Philadelphia: W. B. Saunders & Co. 1901. Price, \$1.75 net. Canadian Agents: J. A. Carveth & Co., Toronto.

In writing a text-book for nurses, it is difficult to impart enough information without giving more than is necessary. In the work before us we consider that Dr. Davis has erred occasionally in both of these directions. The most serious matter with which we have to find fault is the lack of *definite* instructions to the nurse as to the method of securing and maintaining her own personal asepsis. The illustrations—many of them the same that adorn the American Text-Book of Obstetrics—are good. The mechanics of the book are in W. B. Saunders' best style. K.C.M.

Anatomical Atlas of Obstetrics, with Special Reference to Diagnosis and Treatment. By DR. OSKAR SCHAEFFER, Privatdocent in Obstetrics in the University of Heidelberg. Translated by J. CLIFTON EDGAR, A.M., M.D., from the Second Revised German Edition. Philadelphia and London: W. B. Saunders & Co. Canadian Agents: J. A. Carveth & Co., Toronto. Price, \$3.00 net.

Atlas and Epitome of Labor and Operative Obstetrics. By DR. O. SCHAEFFER, of Heidelberg. From the Fifth Revised German Edition. Edited by J. CLIFTON EDGAR, M.D., Professor of Obstetrics and Clinical Midwifery, Cornell University Medical School. With 14 lithographic plates, in colors, and 139 other illustrations. Philadelphia and London: W. B. Saunders & Co., 1901. Canadian Agents: J. A. Carveth & Co., Toronto. Cloth, \$2.00 net.

These are two separate volumes, but such constant reference is made in the text of the one to the text and plates of the other, that we may consider them together.

In the "Anatomical Atlas, with Special Reference to Diagnosis and Treatment," we think that the anatomical part is much better done than the diagnosis and treatment. The plates and descriptions of the varieties of deformed pelves are especially good. The pages are small and the mind of the reader is confused by the use of different kinds of types, italics, and parentheses. We do not find the arrangement of the subject-matter clear. "The Atlas and Epitome of Labor and Operative Obstetrics" is much the better book of the two. The arrangement of the text is much simpler and clearer. With regard to episiotomy the author says: "If there is no reason to anticipate a complete tear into the rectum, episiotomy should not be performed, because the incisions do not heal so readily as an ordinary incomplete perineal tear." This experience seems to remove the only excuse that the operation of episiotomy had.

The latter half of the book consists of a series of "folders," each one of which has twelve or fourteen plates representing

the mechanism of labor under some special condition, or an obstetric operation. These are good.

On the whole, we should say that the books are of value to the specialist, and especially to the teacher of obstetrics rather than to the general practitioner or student. K. C. M.

A Practical Treatise on the Sexual Disorders of the Male and Female. New (second) edition. By ROBERT W. TAYLOR, M.D., Clinical Professor of Venereal Diseases in the College of Physicians and Surgeons, New York. In one handsome octavo volume of 435 pages, with 91 illustrations and 13 plates in color and monochrome. Cloth, \$3.00 net Philadelphia and New York : Lea Brothers & Co.

The second edition of this most excellent work is exactly what one would expect from the distinguished author, being improved by the addition of all the advancements made since its first appearance. The style is free and conversational, yet clear, concise and thorough. The early chapters review the anatomy and physiology of the sexual organs in the male and female with a completeness that enables the reader to grasp the subject matter in its entirety. The illustrations are up-to-date, and materially aid the text. The illustrations of abnormal and pathological conditions are largely original, and are far beyond the average, because they are drawn by an artist who is acquainted with medical and surgical diseases, and only passed by the author when they clearly represent the disease under discussion. Anyone reading Taylor can refer to the illustrations and depend on them representing typical and authentic conditions.

The subject of seminal vesiculitis has received much more attention in this volume than in the previous one. It is right that it should, because, in the reviewer's opinion, this subject involves the solution of many distressing conditions, the relief of which can never be accomplished while the vesiculitis remains uncured. In giving directions for examining the vesicles, we would like to see the author include the knee-chest position for examination, as it will enable the examiner to reach at least an inch higher than any other method. The subject of enlarged prostate is only dealt with as a factor in sexual disorders. We are also of the opinion that the treatment by massage of the enlarged and engorged prostate in these cases will also be of great advantage.

We can heartily recommend the work, and are satisfied that it should be in the possession of all practitioners. The typography and illustrations are far superior to the average medical work, and the publishers can be congratulated on the success of their share of this admirable volume.

The Canadian Practitioner and Review.

VOL. XXVI. TORONTO, SEPTEMBER, 1901. NO. 9.

Original Communications.

ON THE IMPORTANCE OF AN EARLY RECOGNITION OF LOCOMOTOR ATAXIA.—DO THE EYE SYMPTOMS ASSIST US?*

BY J. T. DUNCAN, M.B., M.D., C.M., TORONTO.
Ophthalmologist to the Western Hospital, etc.

As physicians, we all wish to recognize, at the earliest possible moment, any disease which we may be called upon to treat. But in the case of locomotor ataxia—tabes dorsalis—it is of particular, I might almost say of supreme, importance, to make an early diagnosis. Is there any special reason for making such a statement? I answer yes, because the earlier this disease can be brought under treatment, the more hope there is of success.

Some, however, would object to the term "success" as applied to the treatment of tabes. Practically, they hold treatment to be useless, except in so far as palliating the symptoms is concerned. If this be true, if treatment is useless, then it makes little difference how early or how late we recognize the disease. If we can but palliate some of the symptoms, such, for instance, as the lightning pains, we may wait until these appear, and allow the pathological process to progress until inco-ordination has so developed as to render the man a useless member of society. But this disease is not the hopeless one it is often supposed to be. The trend of modern medical thought is to consider the treatment of locomotor ataxia as hopeful, at least in its earlier stages.

As we are all aware, tabes dorsalis has three stages. 1st. Pre-ataxic, or the stage before the staggering gait comes on. 2nd.

* Read at the Annual Meeting of the Ontario Medical Association, Toronto, June 19th and 20th, 1901.

Ataxic, when inco-ordination has produced the staggering gait. 3rd. Paralytic.

It is in the pre-ataxic stage that the greatest success may be looked for in treatment.

To emphasize this fact, let me quote from a great European authority, Babinski, a sentence giving the results of his own experience. He says: "I believe I do not exaggerate when I say that in my hospital practice I see from 200 to 300 cases of tabes each year, and of this number I do not see more than 15 to 20 who are clearly ataxic subjects. In my private practice I have numerous patients who have for many years been affected with tabes, as judged by its characteristic signs, and who, without retaining an absolutely perfect form of co-ordination, have continued at their usual employments, and have never passed the so-called pre-ataxic stage."

Judged by the older conceptions of this disease, when it was looked upon as almost hopeless, and reading such a statement as this, we may well say: How is it possible to attain such brilliant results? I answer, Because now the pre-ataxic stage can be recognized, and the case brought under treatment early. If we think for a moment of the morbid anatomy, we can see how hopeless, in the majority of instances, late treatment would be; although, even in late cases, arrestment of the disease can be accomplished. The principal morbid changes found, as we know, are sclerosis of the posterior columns of the cord, and foci of degeneration in the basal ganglia. Now, ataxy does not appear until the posterior columns have degenerated. If these columns are destroyed, irreparable damage has been done. True success consists in preventing destruction of nerve tissue; to do this, we must be able to recognize the pre-ataxic stage. What are the symptoms of this stage?

Osler gives them as (1) pains, (2) ocular symptoms, (3) loss of the knee-jerk. These are all pre-ataxic symptoms, but it has not yet been definitely ascertained which, in the majority of instances, is the earliest. I believe the ocular symptoms will be found to occupy that position. The eye symptoms are, of course, well known to all of us. Some of them are found in almost every case of locomotor ataxia.

But it will be well to get these symptoms clearly before our minds; then we shall endeavor to determine the question of their priority and of their value.

They are (1) strabismus, or squint; (2) ptosis, or drooping of the eyelid; (3) the *fixed* pupil (Argyll Robertson pupil); (4) inequality of the pupils; (5) optic atrophy.

1. The strabismus of tabes has characters of its own. It often comes on suddenly. It is very likely to be temporary. It may last but a few days or weeks, and may recover as sud-

denly as it came on. It may produce double vision. Any of the muscles may be paralyzed, therefore the squint may be in any direction. Although usually temporary, the squint may be permanent.

2. Ptosis.—The ptosis of tabes may be single or double; generally it is single, only one lid drooping. The ptosis, like the squint, may be temporary or permanent.

3. The *fixed*, or immobile pupil.—On looking at the pupils, no abnormality may be observed. Upon covering them with the hands, however, they do not dilate, nor on exposing them to a bright light do they contract. They are fixed—immovable. (They do diminish in size, however, on convergence; this is the Argyll Robertson pupil).

4. Another pupillary symptom is seen in tabes, namely, inequality. This is generally due to the contraction of one pupil. The vast majority of tabetic patients have one or other of these pupillary symptoms. Berger claims that 97 per cent. of cases of locomotor ataxia show some pupillary symptom.

5. Optic Atrophy.—This produces more or less failure of sight. The atrophy is "grey" and it is "primary." The retinal vessels are not affected in size.

These, then, are the eye symptoms which are encountered in tabes, viz.: Strabismus, ptosis, fixed pupils, unequal pupils, and optic atrophy. Are they the earliest indications of tabes? Osler puts "pains" as the first of the pre-ataxic symptoms. Unquestionably, the diagnosis of tabes is generally made first from the pains; but that is readily explained by the fact that pain speedily drives a man to his physician, but fixed pupils do not. For a fixed pupil produces so little inconvenience, that it may exist for months before it is noticed. But even when pain sends the patient for advice, how often the doctor will find Argyll Robertson pupils existing at the same time? The same remark may be made in regard to loss of the knee-jerk. In such cases, then, the eye symptom has preceded the pain, although it was not noticed. And not infrequently this symptom (fixed pupil) is noticed long before the pain comes on. So with the other ocular symptoms. A patient, in adult life, consults his physician for a suddenly-appearing squint, or ptosis, or for an optic atrophy; and he may have had no pains or other noticeable symptom of tabes. If no cause is discovered for these eye symptoms, we are certainly justified in suspecting locomotor ataxia. In such cases, the eye symptoms are the earliest indications of the disease.

Cases are on record making all these facts clear. Neurologists and ophthalmologists the world over are insisting more and more upon the importance of these ocular symptoms as being among the earliest indications of the disease. In this connection I

would refer you to a paper recently published in the *British Medical Journal*, by C. O. Hawthorne, "A Clinical Study of Thirty Cases of Locomotor Ataxia." He says: "A step forward in our knowledge . . . of locomotor ataxia has been the recognition of the fact that ocular disturbance may precede the evidence of any spinal lesion;" and again, "the cases may be held to justify the view that an optic nerve atrophy, an ocular paralysis, or the Argyll Robertson pupil, must be regarded as affording a definite basis of suspicion . . . of locomotor ataxia." In view of what has been said, I think we may fairly admit that the eye symptoms will, in many cases, most materially assist in the early recognition of locomotor ataxia; but in order to this, these symptoms must be fully understood, carefully examined, and their indications never neglected. How often, in former years, has a patient perhaps casually mentioned to his physician that he had a squint, and had double vision for a couple of weeks, but it passed away, and he thought little of it. Or that he had drooping of one of his eyelids; or that his sight had failed unaccountably of late? Any such statements now would rouse in the mind of the physician the gravest suspicions; he would look upon them as danger signals, and would act accordingly.

In endeavoring to sum up this matter, I would emphasize the following points:

1. The extreme importance of the early recognition and treatment of tabes.
2. That the eye symptoms, in a certain number of cases, precede all the others.
3. That if, especially in an adult male patient, any one of the ocular symptoms be discovered, the case should be thoroughly investigated, even if no other symptom be discerned, and kept under observation until clearly understood.
4. But that if, in the course of such investigation, even our other ocular symptoms be found, the case is probably one of locomotor ataxia.
5. That if such a case be left untreated, ataxia may be expected to appear after a longer or shorter time; but, if treatment be instituted, the patient may remain in the pre-ataxic stage, and continue to be a useful member of society.

SYPHILITIC FEVER OCCURRING AS A COMPLICATION IN A MATERNITY CASE.

REPORTED BY HELEN MACMURCHY, M.D.

In commenting on Dr. Fitcher's paper (which appeared in the *New York Medical Journal* of June 22nd, 1901, and is reproduced in the present issue of THE CANADIAN PRACTITIONER), the *Lancet* (July 27th, 1901) remarks that "in syphilis, fever of such degree as to attract attention seldom occurs, but the subject is well worthy of investigation." The following case, which occurred in the "Burnside" department of Toronto General Hospital, under care of Dr. A. H. Wright, is interesting in this connection.

A. K., aged seventeen years.

At the onset of labor, July 17th, 1901, six o'clock p.m., the head nurse reported a sore (of which the patient had never before complained) upon the inner aspect of the right labium minus. On examination, this sore was found to be much inflamed and indurated, about two inches in length and one inch broad, with a central ulcer of characteristic appearance. The head pressed on the perineum at about 8.15 p.m., and remained there one and one-half hours.

Acting under instructions from Dr. K. C. McIlwraith, the house surgeon in charge applied axis-traction forceps and delivered the child at 9.45 p.m., no laceration occurring.

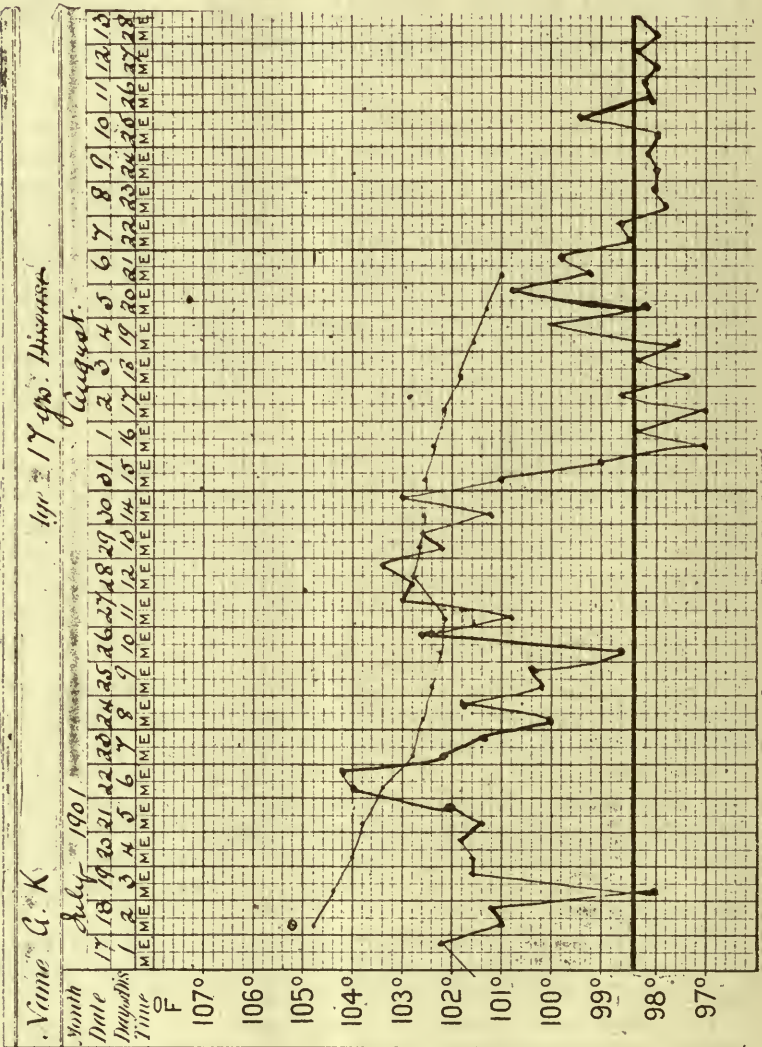
The accompanying copy of the "Burnside" chart shows the temperature and indicates the involution of the uterus. Thus the position of the umbilicus \odot is five and one-fifth inches (thirteen centimetres) above the symphysis pubis, and the fundus uteri on the fourth day was four inches (ten centimetres) above the symphysis.

No explanation of the high temperature suggested itself, except that it was due to syphilitic infection, and the patient gave a history which supported this view.

The infant was re-usucitated with difficulty by the Sylvester method. Hot and cold water were also used. Repeated hemorrhages from the cord were finally controlled by the application of collodion and acetanilid. Weight of infant at birth, six and one-half pounds. The mother made an excellent recovery, reporting herself on September 4th as quite well and strong. The infant was quite well on leaving the "Burnside," but the

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mother, on September 4th, stated that sores had appeared which, from her description, were probably specific.



Treatment.—Iodoform and calomel were dusted freely over the sore, but caused so much irritation that a solution of lysol (3i, or 1 dr. to the pint) was used instead.

Internally, m. 20 of hydrarg. bichlor. 1 in 1000, were given four times a day, well diluted, but this treatment had to be discontinued at the end of a week on account of nausea. An inunction of ung. hydrarg. was then ordered.

At the time of discharge the sore was almost entirely healed. No other symptoms whatever developed.

(The statement made by the writer in the *Lancet*, which has been quoted by Dr. MacMurchy, is entirely misleading, if not incorrect. There is probably in all syphilitic patients, more or less fever, especially during the secondary stage, which is recognized in at least a fair proportion of cases. In syphilis contracted during pregnancy, as has been pointed out by Sigmund, Spiegelberg, Lusk, and others, there is a more rapid and severe development of the primary symptoms, while the secondary are usually very mild. It may be that fever during the primary stage in pregnant women is not uncommon.—A. H. W.)

HERNIA TEN YEARS AFTER ABDOMINAL SECTION.

By A. GIBSON, M.B., HILLSBURG.

Mrs. S., aged 78 years, stout, weight before trouble began about 150 pounds. Always strong and healthy up to about ten years ago, when she was operated upon for ovarian cyst, from which she made a good recovery. Incision for operation was made in linea alba. She first consulted me for palpitation and shortness of breath, in October, 1899. Again in December, 1900, when she suffered considerably from her heart (cardiac neurosis). In February, 1901, I attended her with pneumonia, from which she recovered. On June 5th, 1901, was called back again for her heart. I then found an irregular, dilated heart, extreme breathlessness, sleeplessness, sitting in chair all the time, some edema of ankles, considerably emaciated. From this date on the edema increased, and extended up into abdomen, with some peritoneal and pericardial effusion. Had to give morphine to relieve distress.

For a few days before July 28th she had felt better, and was able to be around. On the morning of the 28th she took a dose of mag. sulph., and about 3 p.m. went out to the water closet, and while sitting on the seat pressing to expel the feces, she put a hand on each side of the abdomen and pressed backward, downward and inward. While doing this something gave way, and she screamed and fainted. I was sent for at once, but as she lived six miles out in the country, it was over an hour before I arrived. I found her on a

sofa, with bowels protruding from a rent in the abdominal wall. She had bled profusely, and pulse was imperceptible, but she was quite rational, and explained how it happened. I sent at once for an assistant, but it was some hours before he arrived, by which time she was unconscious, and seemingly about to expire at any moment, but she lingered on till about 6 a.m. on the 29th, or about fifteen hours after the accident.

Post mortem examination revealed about four or five feet of intestine, together with some omentum protruding from the rupture in the abdominal wall. The tear was in the site of the old cicatrix, extending from near the pubes to the umbilicus, and the skin only was torn for over an inch upwards, and to the left. I could easily insert the whole hand into the abdominal cavity through the wound. The abdominal cavity was pretty well filled with blood clots. On examining the intestine, I found it to be torn directly across, the tear extending through the mesentery to the spine, hence the extensive bleeding which took place. The stomach and bowels were in a healthy condition. Now what were the causes of the rupture? I have been wondering what part the following conditions played in the etiology, viz.: the cicatrix, the dropsy, the pressure and senile atrophy.

Selected Article.

SYPHILITIC FEVER, WITH A REPORT OF THREE CASES.

(From the Service of PROFESSOR WILLIAM OSLER.)

By THOMAS B. FUTCHER, M.B., BALTIMORE,
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Johns Hopkins Hospital.

While its protean characters are universally recognized, physicians do not sufficiently appreciate the fact that syphilis is often responsible for many cases of obscure fever, which clear up only when proper antisyphilitic treatment has been instituted. Even when the fever is associated with a recognizable syphilitic lesion it is often attributed not to the syphilitic infection, but to some other cause, and treated accordingly. The cases, however, which most frequently give rise to an error in diagnosis are those in which at the time there is no outward manifestation of the disease, and where the primary syphilitic infection, with possibly secondary or tertiary symptoms, has occurred so long before that its bearing on the fever is lost sight of. Many cases of syphilitic fever, being unrecognized, are treated as one or other of the acute infectious diseases. The treatment being ineffectual, a more careful physical examination of the patient reveals, possibly, a slight thickening of the clavicles or tibiae or some evidence suggestive of visceral syphilis. Suspicions are then aroused that the fever may be of specific origin and antisyphilitic treatment is begun with a prompt return of the temperature to normal. That this late syphilitic fever is not sufficiently recognized is shown by the fact that few of the writers on syphilis refer to it. Rarely is it mentioned in text-books, though both Osler and Musser emphasize the importance of bearing it in mind in fevers of obscure origin. The purpose of this paper is to draw attention to this interesting symptom and to report a few cases of syphilitic fever which have been admitted to Dr. Osler's wards in the Johns Hopkins Hospital.

Syphilitic fever may occur at various periods during the course of the infection.

1. It may occur, in very rare instances, so long as three or four weeks before the onset of the secondary skin eruption. This early fever is puzzling and is likely to be attributed to some other cause until the eruption makes its appearance.

2. It may precede or be coincident with the appearance of the secondary eruption. This is the so-called "fever of invasion," and it is a very common and important symptom of secondary syphilis.

3. The fever may occur at any time during the course of the secondary or tertiary stages. The late occurrence of the fever is a most interesting feature. In Case III, for instance, it occurred twenty-nine years after the disease was contracted.

The "fever of invasion" is rarely absent at the onset of the secondary symptoms. It is sometimes wanting, however. It usually precedes the appearance of the secondary eruption by a week or ten days. Rarely does it antedate the eruption by more than two weeks. Practically all authorities now agree that this fever is a symptom of the invasion of the system by the organism believed to be the cause of syphilis or by its toxic products. At an earlier date some observers were inclined to attribute it to some coincident infection. At the onset of the fever there is often a transitory erythema of the skin which disappears, to be followed by the true syphilitic roseola a few days later. Lang states that the fever of invasion is seldom ushered in by a chill. It is usually accompanied by headache, malaise, general depression, and rheumatoid pains throughout the body, which are most annoying in the afternoon. The height of the fever varies greatly in different cases. It may only be moderate, not reaching above 101° F. On the other hand, the daily elevation may be much higher, the afternoon temperature reaching as high as 104° F. to 105° F. Lang quotes Stoll as authority for the statement that the fever of invasion in syphilis is usually of a definite remittent type, and states that all syphilologists who have studied this symptom of syphilis agree on this point. All cases do not conform to this rule, however. The fever of invasion, as well as the syphilitic fever associated with the late manifestations of the disease, may present any one of the following three clinical types of fever:

1. A mild continuous pyrexia, where the temperature ranges in the neighborhood of 101° F. Osler states that this type is not uncommon in the fever which ushers in the constitutional symptoms.

2. A remittent type of fever, with morning drops toward normal and evening exacerbations. This, as already stated, is considered the usual character of the fever of invasion.

3. A definite intermittent fever. This is the most remarkable form of all and is the type which is most likely to lead to error in diagnosis.

Syphilitic fever, although usually a secondary manifestation, may occur late in the disease. The febrile diseases for which such a fever is only too often mistaken, are malarial fever,

typhoid fever, tuberculosis, and sepsis. Where general pains and joint-pains accompany the fever, the diagnosis of rheumatism may be made.

The following case was one of unusual interest and illustrates how puzzling some of the cases of syphilitic fever may be during the period of the fever of invasion :

Case I (Hospital No. 32480).—*Syphilitic fever of remittent and intermittent type, commencing at least twenty-seven days before the appearance of the secondary eruption. Fever ushered in by a chill, followed by sweating.*

L. B., a woman, married, aged thirty-four years, was admitted to the gynæcological department of the Johns Hopkins Hospital on September 28, 1900, complaining of abdominal pain. The family and personal histories then obtained were unimportant.

The abdominal pain of which the patient complained on admission began three weeks before she entered the hospital. The night before admission she had a shaking chill, followed by a profuse sweat. The patient was examined by Dr. G. B. Miller, who found a pelvic abscess, with evidences of a double salpingitis. On September 29th and 30th the temperature ranged between 98.7° F. and 101° F. This fever may quite possibly have been due to the local pelvic inflammation. On October 1st the pelvic abscess was evacuated *per vaginam* by Dr. Miller. The temperature failed to drop, and on October 4th it rose to 104.2° F. On this date there was a slight erythema of the skin of the body. As it was thought possible that one of the acute exanthemata was developing, the patient was transferred to the isolation ward. The erythema proved transitory, however, and had disappeared by the following day. This febrile paroxysm, on October 3rd and 4th, was ushered in by a definite chill and accompanied by profuse sweating. The temperature fell very slowly and had not reached normal before another febrile attack occurred on October 6th, the temperature rising in the evening to 105.5° F., falling rapidly and reaching normal at midday on October 7th. Subsequently, there was a third exacerbation of temperature, commencing on October 9th and lasting until October 11th, the temperature reaching 104.2° F. on October 10th. On October 14th a fourth febrile attack occurred, the temperature rising to 103° F. From this time on, the temperature gradually fell, but there were still slight elevations of temperature in the evening.

The case naturally occasioned a great deal of worry. It was thought that there might still be a focus of suppuration in the pelvis. Pelvic examination showed the local condition to be perfectly satisfactory, and no pus focus could be found. The heart and lungs were normal. There were no rose-spots. The leucocytes were frequently counted and were practically normal

throughout, the highest count at any time being 10,000. The spleen was distinctly palpable, and it was thought possible that the case might be one of a typical typhoid fever. The Widal tests proved negative. The character of the fever suggested strongly an æstivo-autumnal malarial infection, but repeated examinations of the blood failed to show any malarial parasites.

On October 17th the patient was transferred to the medical service of the hospital, there being no further indication for isolation and it having been decided that the fever was not due to any pelvic complication. The physical examination of the patient, however, failed to throw any light on the obscure fever from which the patient had suffered. The patient was feeling much better in every way and, as the temperature was elevated only about one degree each day, she was discharged on October 21st, apparently practically well. There was no evidence of any skin eruption when the patient left the hospital. The provisional diagnosis was "intermittent fever of doubtful origin."

The subsequent history of the case was of great interest and clearly explained the cause of the obscure fever. On October 30th the patient returned with a definite macular and papular secondary syphilitic eruption, the diagnosis being confirmed by Dr. Gilchrist. On November 4th, when she again returned for observation, the face, shoulders and arms presented a definite macular eruption, and over the front and back of the chest there were scattered papules and an occasional pustule. There was general enlargement of the superficial lymph glands, the epitrochlear glands being the size of hickory-nuts.

Inquiry was now made into the venereal history of the patient's husband. He admitted exposure to infection on July 4, 1900. On August 11th he came to the Johns Hopkins Hospital Dispensary for treatment, and the records show that he then had a hard chancre on his penis. On August 27th he returned with a macular syphilitic eruption, and again, on September 15th, he was treated for a gonorrhœal urethral discharge.

On questioning the patient, she could give no history of the onset of the primary sore, nor were there any evidences of a chancre made out at the time of the operation, although it was not specially looked for.

The points of interest in this case are: (1) The impossibility of establishing a diagnosis until the secondary skin eruption became manifest; (2) the occurrence of chills and sweating and the close resemblance of the fever to that of æstivo-autumnal malaria; (3) the absence of any definite relationship between the fever and eruption which did not appear until practically four weeks after the onset of the fever; (4) the subsidence of the temperature to nearly normal a considerable time before the appearance of the skin eruption and without antisymphilitic treatment.

A case very similar to the above has been reported by Burney Yeo. The patient had a fever ranging as high as 104° F., to 105° F., with daily oscillations of from 5 to 6 degrees. An interesting feature of his case was that the fever began between twenty-five and thirty days after the exposure, and between three and four weeks before the appearance of the secondary eruption.

Case II (Hospital No. 10581).—*Syphilitic fever of a remittent and intermitent type which for weeks was suspected of being typhoid fever and treated as such. Diagnosis established by the discovery of periosteal thickening over the clavicles and by cessation of the fever the beginning of treatment with potassium iodide.*

N. R., a man, married, aged thirty-nine years, was admitted to Dr. Osler's service in the Johns Hopkins Hospital on August 8, 1894, complaining of pains all over the body. The family history was unimportant, with the exception that his father had died of pulmonary tuberculosis. The patient had always been a healthy man. He had had gonorrhœa, but denied ever having had lues. He used alcohol in moderation.

The patient had been ill and unable to work for three weeks previous to admission. During this period he had felt feverish at times. Nausea, vomiting, and diarrhœa were complained of during the week previous to his entering the hospital. He had not had headache or epistaxis, but had complained of aching pains in the back and extremities and of general weakness. There had been a steady loss in weight, but the patient had not been confined to bed previous to admission.

The physical examination of the patient failed to reveal anything to account for his fever and other symptoms. There was a corneal opacity of the right eye, which, however, was believed to be due to perforating corneal ulcer occurring during childhood. The examination of the thoracic organs was negative. There were no typhoid rose-spots. The liver was not enlarged, but the spleen palpable four centimetres below the costal margin. The superficial glands were not enlarged. There were several pigmented scars on the right shin, but there were no nodes on either tibia. The blood examination was negative for malarial parasites. The urine was normal and did not show the diazo reaction.

As already stated, the patient apparently had irregular fever for three weeks previous to admission. On the day he entered the hospital his temperature rose to 103.4° F. at 8 p.m. The pulse and respirations at the same hour were 92 and 20 to the minute. A two-hour temperature record was taken and, from August 8th to September 12th, there was persistent fever. At times the temperature ran a fairly continuous type, but usually

was remittent or intermittent in character, the evening exacerbations reaching as high as 102° F. to 103° F. Owing to the fact that the patient was admitted to the hospital at a season when typhoid fever was prevailing, and, taking into consideration the character of the fever and the enlargement of the spleen, it was strongly suspected that the case was one of typhoid fever, and the patient was given cold sponges. The diagnosis was always in doubt, however. At no time did rose-spots appear, and the urine never gave the diazo reaction. The case occurred before the Widal reaction came into use.

On September 12th Dr. Thayer made the following note: "Both clavicles towards their sternal ends are remarkably thickened and bowed. They feel remarkably as if the thickening were due to an old periostitis. Both ulnæ and tibiæ are free from nodes. There is a distinct scar on the glans penis, and the patient says that he had a sore on the prepuce."

It was thus suspected for the first time that the fever might be of syphilitic origin. Accordingly, on September 12th, potassium iodide in fifteen-grain doses three times a day, the amount being gradually increased from day to day. The effect on the temperature was most striking. On September 13th there was practically no change, the temperature reaching 102.4° F. at 8 p.m. From this day on it steadily fell, reaching normal on September 16, four days after the potassium iodide was started. It remained normal during the rest of his stay in the hospital. He was discharged from the hospital on October 3rd, feeling perfectly well.

The day the patient left the hospital Dr. Osler made the following note: "This case is of exceptional interest in connection with the fever of lues. Although he had no rash, no visceral lesion, only chronic periostitis of the clavicles, which are now symmetrically enlarged, the history of lues, the presence of the periostitis, and the drop in the temperature after specific treatment was started, seem to justify the suspicion if not conclusion that this case is one of luetic fever."

This case illustrates very well how closely some cases of syphilitic fever resemble typhoid fever, both in the clinical symptoms, and to a less degree in the character of the temperature. It also shows the importance of carefully examining the condition of the long bones in fevers of doubtful origin, for in this patient the cause of the fever was determined by the discovery of periosteal thickening of the clavicles. Prentiss published a similar case of syphilitic fever with remittent temperature, in which typhoid fever was first considered. The presence of a pharyngitis and the development of a suggestive-looking ulcer over the right tibia led to the suspicion that the patient was probably suffering from syphilis. Treatment with

potassium iodide and mercury was followed by an immediate return of the temperature to normal.

Case III (Hospital No. 5796).—*Syphilitic fever, characterized by intermittent chills with fever, and treated first as a case of malaria. Fever occurred twenty-nine years after the primary infection and yielded readily to antisymphilitic treatment.*

W. W., single man, a physician, aged fifty-seven years, was admitted to the Johns Hopkins Hospital in Dr. Osler's service on August 24, 1892, complaining of having suffered from chills and fever. He had had typhoid fever at fourteen, and diphtheria at twenty-eight years of age. In 1864, at the age of twenty-eight years, he contracted syphilis and developed definite secondary symptoms. Later, he had deep ulcers on his body which were apparently tertiary lesions. These persisted for three years, but eventually yielded to mercury and potassium iodide. In 1882, while in good health, a sore developed in the popliteal space and another in the hairy scalp. He again took specific treatment and the lesions cleared up.

About June 15, 1892, several sores appeared on his body, which, from the description given, were apparently rupial in character. About two weeks before admission to the hospital some tenderness and swelling developed over the sternum and in the left shoulder-joint. About the end of July the patient began to have definite recurring attacks of chills and fever, the temperature rising to from 102° F. to 104° F. The physician in attendance thought that the chills were of malarial origin and gave quinine in daily doses of twenty grains, without any effect on the fever. A few days before the patient entered the hospital Dr. Osler saw him in consultation. A definite history of recurring chills was obtained, but the examination of the blood showed no malarial parasites. The fever was regarded as probably of luetic origin, and potassium iodide in increasing doses was begun. When the patient entered the hospital a few days later, on August 24th, the chills had ceased, but he was still having evening elevations of temperature to 101° F. Under the iodide the temperature gradually fell, and by September 14th reached normal and did not become elevated afterward. The patient remained in the hospital until November 2, 1892, on which date he was discharged, feeling perfectly well.

The case just related illustrates the error so often made of mistaking syphilitic fever for malaria. The late occurrence of the fever, namely twenty-nine years after the syphilis was contracted, is of great interest. This is a longer period after infection than in any case of which I have been able to find records in the literature. A remarkable case of syphilis fever is reported by Sidney Phillips. His patient, a woman, had regular intermittent chills, fever and sweating occurring every

other day over a period of eight months. Early in the illness the paroxysms occurred daily, but later presented a typical tertian intermittent type, and the fever was practically identical with that of tertian malaria. Quinine was given a thorough trial, without any effect on the temperature. The fever began to fall very soon after the beginning of the administration of iodide of potassium and reached normal in a few days. In this case the fever occurred nine years after the syphilis was contracted.

Syphilitic fever is mistaken for tuberculosis even more frequently than for malaria. The patients may present themselves complaining of fever, sweating at night, loss of weight, general malaise, and possibly some pain in the chest. The examination of the lungs may show a few râles, which renders the case very suspicious. In other instances the diagnosis is made without any signs in the lungs or elsewhere in the body pointing to tuberculosis. Janeway has drawn especial attention to the prevalence of this error in diagnosis. He points out that the mistake is not made alone by physicians of little experience, but often by those of well-established reputation. In a most interesting paper he cites six cases of syphilitic fever which had been interpreted and treated as tuberculosis. The cases had subsequently come under his personal observation. Four of these had been sent to health resorts for phthisical patients without benefit. Careful examination and inquiry into the history of each case led to a diagnosis of syphilis, with prompt disappearance of the fever and restoration of the health of the patient after the commencement of specific treatment. Morgan reported a case of syphilitic fever of intermittent type, in which acute miliary tuberculosis was for a considerable time suspected. The absence of tubercle bacilli from the sputum and the existence of a luetic history led to the administration of potassium iodide, with prompt recovery from the symptoms and cessation of the fever.

Other cases of syphilitic fever could be cited, but the three cases reported above suffice to draw attention to the main points of interest in the consideration of this interesting symptom of lues.

The following points may be emphasized in connection with syphilitic fever:

1. In all cases of fever of obscure origin the possibility of it being syphilitic should be borne in mind.
2. Experience has shown that physicians of reputation, as well as those of limited experience, are prone to mistake the condition for one of the acute specific fevers.
3. The affections for which syphilitic fever is most often mistaken are malaria, typhoid fever, tuberculosis, sepsis, and occasionally rheumatic fever.

4. The fever may occur as early as four weeks previous to the appearance of the secondary skin eruption, or, what is of greater importance, late in the disease after tertiary manifestations have existed probably for years. In case III it occurred twenty-nine years after the primary lesion.

5. The fever may be continuous, remittent or intermittent. The remittent type is regarded as the most frequent form in the fever of invasion. The fever is often associated with chills and sweating.

6. Careful examination of the long bones and viscera for evidence of tertiary lues should be made in all cases of fever of obscure origin.—*N. Y. Med. Journal.*

Society Reports.

CANADIAN MEDICAL ASSOCIATION.

The thirty-fourth annual meeting of the Canadian Medical Association opened at Winnipeg, Manitoba, on the morning of the 28th of August, and continued for the two following days. There were in attendance over 175 members from all parts of the Dominion, the second largest gathering in the history of the Association, and the meeting itself has been pronounced the most successful of any yet held under the auspices of this Association. There were several visiting doctors from the United States.

Dr. H. H. Chown, of Winnipeg, the President, occupied the chair, while Dr. F. N. G. Starr, of Toronto, discharged the duties of secretary.

In the absence of Chief Justice Killam, Dr. J. H. O'Donnell, one of the oldest practitioners in the West, delivered the address of welcome. He referred to the conditions present in 1869, when Winnipeg was an outpost of civilization, and gave interesting references to Drs. Cowan, Curtis J. Bird, Beddom and Bund, who were already in the West when Dr. O'Donnell moved there in 1869. His address was very much appreciated by the members of the Association.

Dr. R. W. Powell, of Ottawa, the past-President of the Association, then introduced Dr. H. H. Chown, the President-elect.

Dr. Chown on rising to reply was received with hearty cheers, testifying to the high esteem in which he is held by his fellow-practitioners throughout the Dominion. He briefly thanked the Association for the honor they had conferred upon him at the meeting in Ottawa one year ago.

Dr. Starr, the Secretary, presented his annual report. It referred to the meeting at Ottawa last year, to the attendance of 153 members—which was an increase over former meetings in that city, to Dominion Registration, and to the formation of a Physicians' Protective Association.

Dr. Edebohls, of New York, and Dr. Sutton, of Pittsburg, were welcomed to the convention and requested to participate in the discussions.

The Question of Medical Defence.

This was introduced by Dr. Russell Thomas, of Lennoxville, Que., who had been delegated by the St. Francis District Association to present this subject to the Canadian Medical Association. He made a strong plea for the formation of a Medical

Defence Union, and thought that all were agreed of the necessity for such. He supported his contention by citing two or three cases already well known to medical practitioners in Canada, and after showing that such defence unions were a success in England, he concluded by outlining the plan of medical defence already in vogue and supported by the St. Francis District Medical Association, which he was authorized and prepared to hand over entire to the Canadian Medical Association. The discussion of this important matter was deferred until later on in the session.

Address in Medicine—"The Question of Medical Education."

Dr. J. R. Jones, of Winnipeg, delivered this address. In opening his remarks, he referred to the unsolved problems of medical education, the importance of which were especially manifest in view of the establishment of a Dominion Medical Board. Uniform or equivalent curricula, he thought, would greatly facilitate paving the way for the accomplishment of this object. He thought that the great aim of the Canadian Medical Association should be to create a Dominion Medical Board upon such a sound and enduring basis, that the qualifications could be registered in every province in the Dominion. They should not only be Canadian, but Imperial, capable of registration in Great and Greater Britain. There should be no special education for the profession of medicine, and the defect in the preliminary education of medical students should be corrected. The standard is not high enough. Many students came into the medical colleges, their minds totally unprepared, undisciplined, not competent to engage in the different studies of a profession with advantage. Dr. Jones would not eliminate Latin, but would go a step farther, and advocate a more general knowledge of Greek, as Greek was *par excellence* the language of science. He quoted from two eminent authorities who favor the retaining of classical education as a training for professional studies—Dr. Alexander Hill, a member of our own profession, who is Master of Downing College, Cambridge, and Professor Jebb, of Berlin. He referred to medical matriculation examinations, and deplored the lamentable defects in the English paper, the most neglected subject in our primary schools. From an experience of many years as an examiner at the University of Manitoba, Dr. Jones has concluded that the teaching of English takes a very subordinate position in our schools. The defect was a universal one: and it was obvious that if English should become a prominent subject of the medical matriculation examination, every student ought to be able to express his thoughts coherently and intelligently. The didactic lecture came in for adverse criticism, and defects and useless

waste of time, which could be more profitably employed, were pointed out. Persistent work in the dissecting room under the guidance of an experienced demonstrator, who will describe, discuss and constantly orally examine the student, is a rational and effective method of teaching anatomy. Medical jurisprudence and sanitary science were not properly taught.

Dr. Jones supported the "case" method of teaching; and, from personal experience, he favors the English system of clinical clerkships and dresserships as the most feasible, practical and thorough for the development of medical teachings. He referred to the question of Dominion registration, and pointed out two serious objections to Dr. Roddick's bill—first, the great number of the representatives on the council, entailing expenses beyond, at least, our immediate resources; and second, the fact that one of the contracting parties to Dominion registration may secede, and the elaborate fabric, the work of many years, tumble to the ground. The able paper of Dr. Jones was received with much gratification by the Association.

Dr. R. B. Nevitt, Dean of the Woman's Medical College, Toronto, in moving a vote of thanks to Dr. Jones for his excellent paper, stated that he had placed his finger on the weak point of medical education. Dr. S. J. Tunstall, of Vancouver, seconded the motion for the vote of thanks, and also congratulated Dr. Jones for the excellent manner in which he presented his subject.

Dominion Registration.

Dr. T. G. Roddick, of Montreal, who has so long and so ably advocated this much-to-be-desired measure, delivered a stirring address on the subject, ably reviewing the subject of Inter-Provincial registration from the time of its inception to the introduction of his bill at the last session of the House of Commons. The special committee appointed on this question had not yet reported, so the discussion was postponed until that committee had a chance to meet, and report later on in the session. Dr. Roddick now seems to hold to the opinion that the suggestion of Dr. Britton, of Toronto, that representation by population, for Ontario at least, would be advisable.

Infectious Pneumonia.

Dr. W. S. Muir, Truro, Nova Scotia, read this paper. He reported four cases, all of which had occurred between the 1st and the 13th of April of this year, in the same house and in the same family. The first occurred in a child of ten years, the disease terminating by crisis on the 6th day, the child making a good recovery. A sister, age 14 years, contracted the disease;

terminated by crisis on the 9th day, but followed two days after by left-sided pleuro-pneumonia. This proved fatal. The third occurred in a sister of 15 years of age, beginning with a pain on the left side and terminating on the 10th day by crisis and recovery. Number four developed pneumonia but recovery was quick, the patient being about in two weeks. There was no influenza in the town at the time. Dr. Muir spoke of the organism of pneumonia, its cultivation and its detection.

FIRST DAY—AFTERNOON SESSION.

PRESIDENT'S ADDRESS.

As this was the first time that the Canadian Medical Association met in Manitoba, Dr. Chown referred briefly to the future of that important province. Although less than 10 per cent. of the arable land was under cultivation, Manitoba's farmers would this year have a crop estimated at 85,000,000 bushels of grain. He then referred to the work performed in Winnipeg for the purpose of making that city a healthy one, and in spite of the level nature of the land, an excellent system of sewers had been introduced through all the streets; and efficient arrangements had been made for regular flushing of the sewers by means of tilting basins at the upper end of each main sewer. As Winnipeg has two rivers at her doors, the problem of removing sewage was easily and safely solved. Dr. Chown then referred to the water supply, and said that the people of Winnipeg enjoyed as pure water as could be found in the world. An examination of the city water would show that there were in it only nine to thirty colonies of bacteria. The water is taken from an artesian well seventeen feet in diameter and forty-eight feet deep, and although they have been pumping for months a supply of from two million to three million gallons per day, there is not the slightest evidence of any diminution of the amount flowing in. The well is supposed to tap an underground passage which runs from Lake Manitoba, and as this lake is 130 miles long the supply is inexhaustible. The underlying rock formation in that section of Manitoba is a magnesian limestone and, consequently, the water contains a large amount of the carbonate of lime and of magnesia, and is too hard for satisfactory use in boilers and hot water appliances. This is overcome by using Clarke's method of softening, by precipitation of these carbonates through the action of lime water; and the softening plant is unique on this side of the Atlantic. Dr. Chown then referred to the question of tuberculosis, and thought that Koch's tentative denial of the oneness of tuberculosis of man and tuberculosis of cattle still needs the proof of non-inoculability from cattle to man. He instanced cases of young

farmers free from tuberculous taint living in newly-built houses harboring no bacilli and separated by long distances from their neighbors, in whom tuberculosis constantly makes its appearance; and we have here an experiment on a wide scale, and if you can eliminate heredity, house infection and contagion from other cases, to what cause can you describe the origin of these outbreaks? Medical education, the plan of Dominion Registration as introduced by Dr. Roddick, malarial fever, proprietary drugs, the progress in surgery and the future of bacteriology and hematology were subjects ably dealt with; and in concluding, Dr. Chown felt that a duty rested upon the medical profession to get at the true cause of all forms of disease and rescue the public from both the honest fanatic and the ignorant pretender by doing not only all what these claim, but doing more and doing it better.

Sir James Grant, of Ottawa, moved a vote of thanks to the President and characterized the address as extremely interesting and instructive. Dr. J. L. Bray, of Chatham, seconded the motion.

Epidemic Cerebro-Spinal Meningitis.

Dr. James McKenty, Gretna, Manitoba, presented this paper, which gave an account of an epidemic occurring in North Dakota during the winter and spring of 1893. It occurred within an area extending fifty miles from east to west and twenty miles from north to south, and was comparatively definitely limited. About 70 persons were seriously ill and almost as many others suffered from mild manifestations of the disease. Of the seventy cases twenty-five ended fatally, a mortality of about 35 per cent. In the practice of Dr. McKenty there occurred some thirty cases, a brief record of twenty-two of these being kept. The average age was seventeen years; the youngest fifteen months; the oldest thirty-eight years. The duration of the illness extended from twelve hours to fifteen weeks. No post-mortem was made in any case. Dr. McKenty then described in detail the clinical aspects of several cases.

Splenic Anemia, with Case.

Dr. A. J. Macdonnell, Winnipeg, contributed this paper with the history of the case. This was an exceedingly rare disease. In 1898 the number of cases recorded did not exceed thirty, but since that time there have been fifty additional cases reported. R. N., aged 27 years, born and lived all his life in Manitoba; family history good; environment good; has never had malaria; habits and mode of life good; positively never had syphilis. The present illness began in August, 1899. Felt heavy

on the right side, with a feeling of fulness and weight. In January, 1900, gave up work on account of muscular weakness. There was no vomiting. The patient consulted Dr. Macdonnell in March, 1900, walking into his office with considerable difficulty. There was no enlargement of lymphatic glands. Enlargement of the stomach could never be percussed or palpated. Liver dulness was practically normal. There was no jaundice or pain in the liver region. The patient succumbed to the disease, but no post-mortem was held. Another case occurring in a patient aged seventeen was reported. Dr. Bell made a blood count in this case, which at different times ranged 3,540,000, then 3,600,000, then 3,400,000, with 7,602 white-blood cells. In this case all the other organs were normal. And there seemed to be no predisposing cause in this case. Dr. Macdonnell stated that only ten autopsies had been made on people dying from this disease. He referred to the conditions found post-mortem in these cases. The treatment was stated to be rest, diet, and vigorous doses of arsenic. The mortality is set down at 20 per cent. As far as operation is concerned, physicians will not be satisfied until it is clear that the patient recovers from the operation as well as from the disease. If we are sure of our diagnosis, then surgical intervention is deemed advisable.

Physical Development.

Dr. J. N. Hutchison, of Winnipeg, read a carefully prepared paper on Physical Development. The paper did not deal with anything new, but called attention to and emphasized certain facts of considerable importance. He considered that children were sent to school at too early an age, and as a result there was danger of brain over-work. He insisted upon the necessity of having healthy parents—and deplored the system of education which develops the mind at the expense of the body. He was an advocate of periodical lectures by duly qualified physicians to separate classes of boys and girls on the subject of sex; but the primary responsibility in this matter he placed upon the parents. There would be real progress in the prevention of tuberculosis when people, the subject of the disease, recognized that they should not marry. The paper, which was listened to with close attention, closed with a reference to the problems of those unfortunates, who are neither mentally or physically qualified for the duties of life.

Report of Cases Treated with Super-Heated Dry Air.

Dr. W. H. Pepler, of Toronto, introduced this subject in a paper which cited his experience and observations in the treatment of certain cases by this plan or process. He briefly de-

scribed the apparatus and the method of treatment. It only takes twenty minutes to reach a heat of 300° F. The average duration of the application of the heat is forty-five minutes. The physiological and therapeutical effects noticed were referred to as dilatation of blood vessels, etc. He administers the treatment one hour after mealtime, with due regard that there shall be as little as possible excitement and exertion. He has not seen any ill-effects from the treatment. He first gave notes of the case of a patient, a man aged 35 years, who had suffered for some time from varicose ulcer of the right leg, with considerable pain. This patient had a treatment of thirty-five minutes duration, and was able to walk home with very little discomfort. After three times, in ten days, the ulcer was very much reduced in size. The second case was a patient twenty-two years of age, who had been troubled with rheumatism for two years past. A temperature of 320° was employed with good satisfaction. Several other cases of rheumatism and eczema were reported. The treatment in each case proved highly satisfactory, patients never complaining of any discomfort, and all expressing satisfaction with the treatment. Dr. Pepler subjects a considerable portion of the patient's body from a temperature of 280° to 320° F. The results are often not apparent for some time after treatment.

Dr. McAdam, of Battleford, asked Dr. Pepler if he had ever tried the treatment with high temperature, where he had any doubts of the condition of the heart.

Dr. MacDonald, of Brandon, referred to a case which had come under his observation in which there was heart trouble. Perspiration occurred freely but with no effect in a depressing way upon the circulation. Treatment in this case was continued for two weeks, but he had never determined that there had been any effect upon the heart, although there was a small heart lesion at the time.

Dr. Pepler, in reply, said he could not speak personally as to any deleterious results from weak heart. Of course there were many cases reported where heart trouble was present. He personally had never noticed any heart or head symptoms in his cases. He thought with care there would be no bad results.

Orthopedic Treatment of Deformities and Disabilities Resulting from Diseases of the Nervous System.

Special reference to tendon transposition by Dr. B. E. McKenzie, of Toronto. He spoke of disabilities and deformities resulting from paralysis, some of which were commonly regarded as hopeless; but the conditions of a great majority of them were remediable and should receive a considerable amount of attention. He was at some pains to

explain the respective motion of joints, particularly the ankle joint and knee joint, especially calling attention to the normal conditions of equilibrium, and then showed how the muscles of some of the groups at times become paralysed and the balance and equilibrium thereby destroyed. Mechanical treatment was often necessary, and often efficacious as well; massage and electricity had their respective places, but he made particular reference to the method of treatment that had been in vogue for twenty years, and had been introduced on this continent by Dr. Parish, of Philadelphia. He went carefully into an explanation as to how muscles can be transferred from their usual point of action, and then he gave an account of several cases in which he had successfully accomplished this. In his opinion amputation of a limb because of apparent disability should seldom or never be resorted to.

In answer to Dr. McAdam, Dr. McKenzie disapproved of jackets in the treatment of curvature of the spine.

Dr. Clarence Starr, Toronto, stated the subject was of great interest to him, as he was interested pretty largely upon the same lines of surgery. Dr. McKenzie has indicated a large number of cases of paralysis which can be wonderfully helped by operative procedures.

Dr. Starr thought that Dr. Bowlby, of Boston, deserved a great deal of credit for the work he has performed in this connection.

Dr. H. B. Small, of Ottawa, referred to a case Dr. McKenzie had operated on. In this case, previous to operation, the boy had great difficulty in arising from the sitting posture, and when walking he had to rest every few yards. After the operation he was very much improved, and when Dr. Small last saw him, about a week ago, he could walk very easily, and never had to support himself. The improvement during the last four or five weeks was especially very marked.

SECOND DAY—MORNING SESSION.

Mild Smallpox.

Dr. G. A. Kennedy, McLeod, Alberta, presented this paper. It dealt with the recent outbreak of the disease in the North-West Territories, an outbreak which was widespread and which had existed for some time before its true nature was recognized. Dr. Patterson, Quarantine Officer for the Dominion Government, was satisfied that there had been 1,500 cases. A noteworthy fact was that the greatest number of cases occurred among the French halfbreeds, who had never been vaccinated; and further, Indians on reserves had not suffered to any great extent, as annual vaccination is the rule. Not one case was seen or heard of among Galicians, Doukhobors or

Roumanians, which was due to the fact that compulsory vaccination was the rule in youth, and then they had been re-vaccinated on their recent passage across the Atlantic and at Halifax. Fifty per cent. of all cases were extremely mild in character; forty per cent. were cases of typical varioloid; ten per cent. were severe, almost confluent. The mortality was slight, only thirteen deaths occurring; and the disease prevailed fully as much amongst adults as amongst children.

Dr. Muir, Truro, Nova Scotia, discussed the merits of the different vaccines on the market, and the paper was further discussed by Dr. MacDonald, of Brandon, Dr. Inglis, of Winnipeg, Dr. D. H. Wilson, of Vancouver, and Dr. Montizambert, of Ottawa. The latter considered it would be unfortunate if the impression went abroad that any doubt existed in the minds of the members of the Canadian Medical Association, as to the true nature of the disease which had been epidemic for some years. He considered the facts presented in Dr. Kennedy's paper relating to the Doukhobors and Galicians were perhaps the most valuable portion of it. At the close of this discussion the following resolution was moved by Dr. R. S. Thornton, seconded by Dr. J. L. Bray, and unanimously adopted: "Resolved, that in view of the general prevalence of smallpox throughout the continent, this Association desires to urge upon the profession and the public generally the necessity of vaccination and re-vaccination."

Chronic Ulceration of the Stomach, Simulating Cancerous Disease.

Relation of a case of Gastro-Enterostomy with Murphy Button. Recovery. By Dr. J. F. W. Ross, Toronto.

This occurred in a woman twenty years of age, the condition of whose stomach had been bad for three years. She was a nurse in the training school of a hospital, and her gastric conditions grew gradually worse and worse. Dr. Ross was asked to see the patient by Dr. E. B. O'Reilly, Hamilton, in December, 1899. He found her emaciated with the opium habit already formed. In January, 1900, he again saw her with Dr. Griffin, of Hamilton. At this time rectal alimentation was being persevered in with considerable benefit. In March, 1900, she was discharged from the hospital, and remained well for two weeks. As soon as food passed into the stomach, great rigidity of the right rectus muscle was noted. When the patient came under Dr. Ross's attention she weighed about 75 pounds. As malignant disease of the stomach is rare at this age of life, it was difficult to diagnose the tumor as such, and the symptoms pointed to the pyloric end of the stomach. It was not possible to say whether cancerous or not. The symptoms pointed to

the presence of ulcer, but the thickening easily made out led to the belief that malignant disease had been grafted on to the ulceration. Some dilatation also could be made out, but the rhythmic muscle waves, so characteristic of pyloric obstruction, could not be found; but a large growth was found at the pyloric end. The case was looked upon as hopeless, and decision was arrived at not to remove the growth, but to give temporary relief by gastro-enterostomy. This was done, and the patient made an uninterrupted convalescence. Eleven months after the operation the patient weighed 140 pounds, and looked the picture of health. On examination of the abdomen no mass could be felt, and the patient was not suffering from any gastric symptoms at all. Dr. Ross then went into the literature on the subject, quoting Fagge, Sydney Martin, Monihan and Mayo Robson.

Dr. Laphorn Smith, Montreal, began the discussion, stating that the case was especially interesting to him, but rather from the general practitioner's point of view. He believes that no case of cancer of the stomach ever begins as cancer of the stomach. First there is some sort of irritation of the mucous membrane. This irritation finally becomes chronic ulcer, and upon this the germ of cancer is engrafted, or whatever it is which is the essential constituent of the cancerous process.

Dr. Martin, Montreal, discussed the importance of the examination of the stomach contents in these cases.

Dr. Bruce, Toronto, stated that he had an experience with a case a year ago, which corresponded closely to the one Dr. Ross has reported. His patient was thirty-eight years old.

Dr. Gilbert Gordon, of Toronto, thought we should look at these cases from the standpoint of the physician as well as from the standpoint of the surgeon.

Dr. Howitt, of Guelph, stated that the second case of ulceration of the stomach upon which he operated was one of acute perforation.

Dr. Ross thanked them for the reception they had given his paper.

Some Forms of Hyperacidity and Their Treatment.

Dr. C. F. Martin, of Montreal, presented notes of some interest, judging from the results of systematic examination of the gastric contents. The unfortunate general employment of the term dyspepsia is responsible for the disregard of this condition. In the case of organic disease, producing excessive secretion, the diagnosis is often difficult. He gave the history of two cases in illustration, the second being in an individual forty-five years of age, who gave the usual history of having been ill for six months. There was no obstruction of the

pylorus, but simple dilatation, and the diagnosis was hyperchlorhydia with simple dilatation of the stomach. He also referred to the medical treatment following gastro-enterostomy.

Dr. Macdonnell, of Winnipeg, discussed this paper.

Medical Defence.

The report of the Committee on Medical Defence was here presented by W. S. Muir, of Truro, Nova Scotia. It reported favorably on the formation of a Medical Union, and the organization thereof was immediately perfected. It will be known as the "Medical Protective Association," will be incorporated, and will have for its object the protection of the character and interests of medical practitioners in Canada. It will further promote honorable practice, will aid in suppressing or prosecuting unauthorized practitioners, and will seek to advise and defend or assist in defending members in cases where proceedings involving questions of professional principle or otherwise are brought against them, and other like matters. Dr. R. W. Powell, of Ottawa, was elected President; Dr. McKinnon, of Ottawa, Secretary; and Dr. James Grant, jun., of Ottawa, Treasurer.

Report of Committee on Dominion Registration.

It is proposed to secure an amendment to the B. N. A. Act, or to take advantage of section 91 of that Act, and under it obtain legislation from the Dominion Parliament by which the profession in Canada might form a Dominion Council, which could be supplemented by legislation by the various provinces recognizing any certificate of standing issued by the Dominion Council as entitling a holder to practice in such provinces. Dr. Muir approved of Dominion registration, and spoke for the Province of Nova Scotia. Dr. Jones voiced the sentiments of the profession for Manitoba. Drs. A. A. Macdonald, and J. L. Bray, endorsed the scheme for Ontario. Dr. Russell Thomas spoke for Quebec. Dr. Christie said that New Brunswick was in favor of Dominion registration. Dr. Lafferty said the North-West Territories were favorable.

SECOND DAY—EVENING SESSION.

Cancer of the Uterus, With Lantern Demonstrations.

This was a very interesting and profitable demonstration, conducted by Dr. Thos. S. Cullen. In introducing Dr. Cullen, Dr. Chown spoke of him as a young Canadian who had gone wrong in having removed to the United States and having never returned. Dr. Chown considered that the experimental

work pursued by Dr. Cullen if done in Canada, would meet with as signal success as that which attended his labors in the United States. For over an hour Dr. Cullen was engaged in showing a large number of excellent lime-light views, the results of microscopic examinations of tissues; each view was lucidly explained by the demonstrator. At the close of his excellent demonstration Dr. Cullen was accorded a hearty and unanimous vote of thanks, moved by Dr. Eccles, of London, and seconded by Dr. Gray, of Winnipeg, and carried amid great applause.

Skin Diseases, With Lantern Demonstrations.

This was another valuable demonstration, and was conducted by Dr. Francis Shepherd, of Montreal. He first exhibited and demonstrated cases of blastomycetic dermatitis, and further spoke of a few cases which he had seen of this disease. Views were given also of cases after treatment with iodide of potash. Some interesting views were those caused by drug eruptions, of which he showed two or three due to salicylate of soda. In one of these Dr. Shepherd said the lesions first came out with large welts like urticaria. This is rather a rare form of drug eruption. It appeared after two doses of ten grains each of the drug. One case almost died of acute laryngitis from the eruption in the throat. Amongst other views shown were papular purpura, which is generally associated with rheumatic attacks, psoriasis of the nails, X-ray burns as the result of one application, and most interesting were cases of smallpox, one showing pustules upon the palm of the hand; particularly interesting, as in adults you never see chickenpox upon the palm of the hand, but you invariably do smallpox. Views of feigned eruptions were also shown. This demonstration proved so interesting to the members that Dr. Shepherd was frequently called upon to give more or go on.

The Varieties and Distribution of *Bacillus Diphtheriae* and their Clinical Significance.

Dr. F. F. Westbrook, of the University of Minnesota, presented a paper on this subject, primarily from the laboratory point of view. He exhibited a carefully prepared chart showing in tabulated form the results of numerous examinations in schools, and stated the conclusions which he deduced from these facts. Formerly, it was believed that the bacillus remained localized at its point of entrance, but now within recent years, however, careful observations have shown that the toxins had been distributed throughout the body and the bacillus itself found in organs far removed from the atrium. From evidences of 230 cases of diphtheria at autopsy, observers had called attention to

the frequency with which the bacillus of diphtheria was found in the organs of the body. The bacillus and its toxins have been shown to be capable of producing lesions which differ greatly from each other, as in ulcerative endocarditis, meningitis, etc. In summarizing, Dr. Westbrook said where each school was reported and where great care was taken in the isolation of clinical cases with typical form, the percentage was very small.

Removal of Hairy Tumor from the Stomach, weighing 23 ounces.

Specimen. Recovery. By Dr. H. A. Bruce, Toronto.

The subject of this case was a woman, aged 26; she had been married six years and had two children. A lump was noticed in the abdomen two months previous to the birth of the last child. Patient had no symptoms. The lump was about five inches in width and it could be lifted forwards. It reached to within three inches below the umbilicus. It gave the patient no special discomfort, there being absolutely no symptoms present. Dr. Bruce advised exploratory incision. This was done on July the 22nd last at St. John's Hospital, Toronto. On opening the abdomen in the middle line the spleen and kidneys were found in a normal condition, but there was a large mass in the neighborhood of the stomach. The surgeon could make out the mass lying free in the stomach, a portion extending through the pyloric end of the stomach. An incision was made into the stomach and the tumor removed. After removing the mass of hair, the opening of the stomach was closed in the usual way. Hot salt solution was given for two hours and nutrient enemata for six hours. Twenty-three hours after the operation sips of hot water were given by the mouth. Forty-eight hours after operation patient was given one half an ounce of milk and lime water every hour. She left the hospital on the 20th day. The tumor was entirely of hair exactly the same color throughout and the same color as the hair on her head. It was about 24 inches in length, being about two inches in diameter at one end and gradually tapering down to a point at the other. Dr. Bruce considered this case rare and offered no solution as to how the hair got into the stomach. There were no evidences of hysteria present in the patient. There are some specimens of hairy tumors in the McGill Museum at Montreal.

THIRD DAY—MORNING SESSION.

A Case of Transplantation of the Ureter for Cure of Uretero-Vaginal Fistula. By A. Lapthorn Smith, Montreal.

This occurred in a married woman, thirty-four years of age, who came to Dr. Smith on the 1st of July, 1901. During parturition, forceps were employed and the vagina lacerated, and

ever since there has been a constant flow of urine by the vagina. Operations for her relief had been performed in England without success. Dr. Smith had seen Sanger perform an operation of this character in Leipsic when he was there three years ago, namely, to open the peritoneum running over the large vessels at the brim of the pelvis and to feel for the artery, see the vein and pick up the third tube, which was the ureter. The operation was done in the highest Trendelenburg posture. A very small incision was made in the peritoneum lining the pelvis in the line of the ureter, a silk ligature was passed around it and then the ureter was severed a little above the ligature. The end of the ureter was split open to a distance of a third of an inch. A slit was then made obliquely into the right upper corner of the bladder and the ureter stitched into it, the mucous membrane of the ureter to the mucous membrane of the bladder with very fine chromicized catgut. This is the first time this operation has been done in Canada, and Dr. Smith stated that not a drop of urine had passed through the fistula since.

Syphilis as Seen by the Ophthalmic Surgeon.

This paper was read by Dr. F. Buller, Montreal. In commencing his paper, Dr. Buller expressed the hope that it would elicit a little discussion. It often falls to the lot of the ophthalmic surgeon to discover the presence of active syphilitic virus where the disease had long been considered cured, or that the subject cherished the belief that there was no more to fear from it. The ophthalmic surgeon is scarcely, if ever, called upon to treat the disease in the primary stage. The largest share of his work is in connection with the tertiary period, and in this class of case the disease has been apparently cured for a long period of time. Dr. Buller considers that the time at which the syphilitic lesion makes its appearance is always a very important element in the diagnosis. Discussing medication, Dr. Buller does not believe that the protiodide of mercury, at least as ordinarily administered, is a reliable anti-syphilitic. He appears to favor the inunction method first and then grey powder. The following took part in the discussion of this paper: Dr. Lafferty, of Calgary, Dr. Muir, of Truro, Dr. Laphorn Smith, of Montreal, and Dr. Shepherd, of Montreal, who also condemned the protiodide treatment.

The Present Outbreak of Smallpox in America.

This subject was presented by Dr. H. M. Bracken, Health Officer, Minnesota. He outlined the origin of and traced the course of many outbreaks in various parts of the State of Minnesota. The case of a porter on the Great Northern Railway,

who arrived in St. Paul in March, 1899, was mentioned as the source of the outbreak. He was supposed to have contracted the disease in Seattle, and when told that he had smallpox he said that if so there was plenty of the same disease where he came from. Other epidemics were spoken of in various parts of Minnesota with a total of 9,429 cases, and the disease has still many centres in that State. It is impossible to locate positively the source of the present widespread epidemic further than that it spread from the southern and south-western States into North Dakota, Minnesota, Nebraska, Montana and Texas. Dr. Bracken showed that returning soldiers from the Philippines were not responsible for its introduction. He suggested that it was probably imported into the United States by Cuban refugees before war broke out between that country and Spain.

An interesting discussion took place on this paper. Dr. Russell Thomas wanted to know where the best vaccine was manufactured, a product that could be relied upon.

Dr. Inglis, formerly Medical Health Officer, Winnipeg, related his experience in the schools of Winnipeg, and spoke of some of the bad effects resulting through impure vaccine.

Dr. Bracken in reply:—Vaccine was frequently spoilt by not being kept in proper temperatures, as it was constantly being shipped in cans which were too hot, and subsequently kept in warm offices. The Health Commissioner of Minneapolis kept all his vaccine in an ice-box, but, of course, not frozen, and had obtained good results. Replying to a question in regard to isolation, Dr. Bracken favored eighteen days' quarantine.

The Necessity of a Recognition and Isolation of Trachomatous Patients in Canada.

In the absence of Dr. W. Gordon M. Byers, Montreal, Dr. C. F. Martin, of the same city, read this paper. The paper recited the history of a young girl from Glengarry County, Ontario, who came to the clinic at the Royal Victoria Hospital, Montreal, with a most intense condition of granular lids. She had been unable to open her eyes properly for months past, and her vision was reduced to the counting of fingers. The seriousness of her disease had not been recognized at home, as she mixed freely with other members of the community. Another case was referred to in the County of Leeds, and in this case as well no precautions had ever been taken to prevent the spread of the disease. Dr. Byers believes that there are many unrecognized and untreated cases scattered here and there throughout the Dominion. The disease is said to be prevalent in districts of Manitoba and certain centres of the Eastern Counties of Ontario, and others in Quebec. The trachoma problem has had to be faced by one government in Europe, and the matter has

been brought to the attention of the Dominion Government, which has not yet taken any action thereon. Dr. Montizambert stated that the question of exclusion of trachomatous immigrants had been under consideration by the Government for some time. He considered these people somewhat undesirable immigrants.

A Few Notes on the Treatment of Typhoid Fever.

Dr. J. L. Bray, of Chatham, discussed this subject under medicinal, dietetic and hygienic headings. The first, he thought, might be eliminated, except in cases where complications arise, and he thought a certain amount of medicinal treatment useful during the initiatory stages. He was in the habit of employing calomel. Tympanites could be avoided to a great extent by a proper diet. In feeding, he now gives but very little milk, but that little always peptonized. He believes in making the patient drink two or three quarts of pure water in the twenty-four hours. Albumen water with sugar may be given from the first. After the first two weeks he gives liquid peptonoids, or some of the numerous preparations of beef, jellies, mutton broth, or a soft-boiled egg.

As regards the hygienic treatment, the bedding and the night clothes should be changed daily. The room should be kept thoroughly ventilated, admitting plenty of fresh air and sunshine. The patient should be sponged frequently with tepid water, and you get just as good results from tepid water as from sponging with very cold water or the cold bath, and it is not so distasteful to most patients. In hospital practice, Dr. Bray uses the electric fan after using the tepid water. He has found this plan very satisfactory, especially in young and sensitive children.

Dr. Russell Thomas discussed the paper, and said that he had found the ice-cap beneficial, that it did not disturb the patient, and had a decided effect in reducing the temperature.

THIRD DAY—AFTERNOON SESSION.

The Address in Surgery.

This was delivered by Dr. O. M. Jones, Victoria, B.C., and it proved a very able and masterful effort. He opened his address with a reference to surgical diseases in Western Canada as compared with those in the East, and stated that he had often found western sufferers more impatient, which often demanded severer methods. He illustrated this by citing a humorous incident. A lodging-house keeper, on learning that one of her boarders was to have an operation performed on a Wednesday, wrote to the surgeon asking that it might be postponed until

Friday, as her daughter was to be married on Thursday, and they didn't want the corpse home until after the wedding. The address dwelt mainly with the surgery of the stomach, and related the deductions Dr. Jones has arrived at from his own experience of twenty-six cases. His first operation upon the stomach was in 1893—a case of pyloric obstruction in a wiry woman. Senn's plates were used. This patient died in three days, the result not being encouraging; and Dr. Jones attributed the failure to the use of catgut, instead of silk sutures. The introduction of Senn's plates and the Murphy button gave a great interest to intestinal surgery, as before 1890 operations on the intestines were rare. He discussed the preparation for operation, and first spoke of gastrostomy, an operation which he had performed five times, for ulcer of the esophagus. In four of the cases the operation was performed with very excellent results. He then discussed the class of cases in which pylorotomy is indicated, and said that rapidity of operation in these cases is the very important factor; prolonged operation has generally proved fatal. A suitable case should be cancer of the pylorus. The time occupied in performing the operation is not great. In one of his cases he performed posterior gastro-enterostomy, and this patient still lives, and it is now nearly three years since the operation. Gastro-enterostomy was next discussed. This Dr. Jones considered the most important and most interesting part of the whole subject. It is the most frequent and the most useful, and the simplest of all the operations performed upon the stomach. It is performed for pyloric cancer, ulcer and stenosis, and for gastric ulcer, dilatation, etc. Nothing can be simpler than this operation performed with the Murphy button. Dr. Jones has used it in fourteen cases, and in only one case was there any trouble. In two of his cases, which died from shock, he examined one, and found perfect union. He has found that the passage of the button has taken from fourteen days to four months; and in several cases he has not been able to obtain the button. A recital of several cases followed, which proved very interesting. Dr. Jones closed his paper with a few words on perforating duodenal ulcer.

Dr. F. J. Shepherd, of Montreal, proposed a vote of thanks; Dr. A. A. Macdonald, of Toronto, seconded this, and Sir James Grant, of Ottawa, supported the motion, which was unanimously passed by the Association.

[This address will be published in our next issue.]

A Surgical Procedure for the Relief of Ovarian-Tension Pain.

Dr. Henry Howitt, Guelph, Ontario, read this paper. Is not pain frequently, if not usually, caused by tension on some nerve filament? In Dr. Howitt's opinion the answer should be in the affirmative. The operation Dr. Howitt employs is quite simple.

The ovary is exposed, and then a number of cross sections are quickly made through the tense capsule in such a manner as to divide it. Then the larger Graffian follicles are opened. These are merely touched with carbolic acid. If the capsule is thickened a portion should be removed. Hemorrhage has never been troublesome. Adhesions give rise to no complications. Dr. Howitt recited the histories of two or three cases in support of the operation.

Dr. Laphorn Smith stated that he had never heard of this operation before, and considered that it was original with Dr. Howitt.

Symposium on Tuberculosis.

Prof. Russell, of the University of Wisconsin, introduced this subject in a careful yet exhaustive paper on human and bovine tuberculosis and their inter-relation. The importance of any phase of investigation relating to tuberculosis and its relation to milk is unquestioned in these latter days when the general public is beginning to appreciate, for the first time, the magnitude of the problem that confronts them in attempting to lessen the ravages of the "great white scourge" of the human race.

In considering this subject it may be approached from two points of view: (1) From the standpoint of animal industry; (2) From that of public health.

BOVINE TUBERCULOSIS AND ANIMAL INDUSTRY.

The rapid extension of the disease among cattle within the last few decades has forced upon breeders and dairymen the necessity of considering this subject whether they desire it or not. It is customary in many quarters, even yet, to decry all consideration of this matter as unnecessary, inexpedient, and harmful to the dairy interests. But as is too frequently the case, the motive for such action rests upon a financial foundation, and many breeders are averse to a calm, judicious discussion of the matter simply because it may mean financial loss to them.

Since the introduction of the tuberculin test as an aid in the diagnosis of the disease in cattle, it has been positively determined that the malady, at least in its incipient form, is very much wider spread than was formerly supposed, but it by no means follows that all animals that react to the tuberculin test are actually in a condition in which they or their product are dangerous to man and beast.

The slow, insidious nature of the disease that characterizes it in the human is also to be found in the cattle, and not infrequently an animal may be infected with the seeds of the disease for a considerable time—even a year or so—without showing

in any degree physical symptoms that are manifest to even the animal expert. Such animals are not diseased in the ordinary meaning of the term, *i.e.*, they are not capable of transmitting the disease, either directly or indirectly, through their milk supply or meat. The affection in such cases is latent, generally confined to various lymphatic glands; but animals so affected are, however, potentially dangerous, for the latency of the disease may be overcome through the operation of various factors, and the chronic type may thus be awakened into an acute phase. It is in this way that the disease spreads slowly and unperceived through a herd. Before it has made such inroads as to cause actual death of any considerable number of animals, many more have acquired the trouble, at least in the earlier phases. Necessity of controlling its spread and eradicating it is evident for the sake of the herd itself, if from no other point of view. Successful animal industry, especially with cattle, requires that herds shall be kept free from all taint of this disease. As to treating milk, Prof. Russell said pasteurization and sterilization were the two best forms of applying heat to destroy the organism. He recommended the rotatory pasteurizing machine, one of which has been used in Winnipeg for some years, as the best method of removing organisms from milk.

Dr. Good, of Winnipeg, in discussing the paper said that it afforded him some relief to learn that milk is not so dangerous after all. He stated that he had been avoiding milk and all organic fluid for the past year or two, but he was glad to know that he could now go back to its use with the same freedom as in his younger days. He then moved a vote of thanks to Prof. Russell, seconded by Dr. McArthur, which was unanimously adopted.

Dr. A. J. Richer, of Montreal, contributed the next paper on the Sanitarium Treatment of Tuberculosis. This treatment had been introduced by Dr. Trudeau in America under great difficulties, and at the present time this distinguished scientist was able to house and treat over one hundred individuals in his institution. According to Dr. Richer, the treatment is made up of rest, out-door life, over-feeding and medical supervision. This latter was described as the keynote to success in phthisical treatment. Over-feeding was also emphasized.

The last paper was contributed by Dr. Gilbert Gordon, of Toronto, and it referred to the etiology and the early diagnosis of pulmonary tuberculosis. He spoke of the early stages of the disease, and thought that we ought to be able to diagnose it before the appearance of the bacilli in the sputum. Direct inheritance he considers very rare. The inhalation of

dried sputum is the most direct cause. Dr. Gordon considered that we are woefully behind in Canada in fighting this plague, and more money should be spent by governments and philanthropic individuals in fighting this disease. He went carefully into the symptoms of the pre-tubercular stage, and considered that a persistent cough was a very dangerous symptom.

An important discussion took place upon this topic. Dr. Lafferty warned the profession in Ontario against sending advanced cases to the North-West Territories. Dr. Barrick, of Toronto, pointed out that Ontario was leading in regard to the treatment of tuberculosis, and he hoped to see the Sanitarium brought with a wide open door to all conditions of life. Dr. Brett, of Banff, suggested that the Association should pass a resolution pointing out to the Parliament of Canada the necessity of providing for the establishment of sanatoria for the benefit of the community.

The report of the Nominating Committee was presented by Dr. W. S. Muir, Truro, N.S., who expressed regret at having to accept the resignation of their general secretary, Dr. F. N. G. Starr. Montreal was selected as the place of meeting in 1902, and a suggestion was left with the members of the Association that they meet in British Columbia the following year.

These officers were selected for the ensuing year: President, F. J. Shepherd, Montreal. Vice-Presidents—Prince Edward Island, S. R. Jenkins, Charlottetown; Nova Scotia, T. F. Macdonald, Hopewell; New Brunswick, Wm. Christie, St. John; Quebec, J. Alex. Hutchison, Montreal; Ontario, Bruce L. Rirdan, Toronto; Manitoba, A. J. Macdonnell, Winnipeg; North-West Territories, H. G. McKid, Calgary; British Columbia, J. M. Lefevre, Vancouver. General Secretary, George Elliott, 129 John Street, Toronto; Prince Edward Island, H. D. Johnson, Charlottetown; Local Secretaries: Nova Scotia, J. W. McLean, North Sydney; New Brunswick, W. L. Ellis, St. John; Quebec, C. F. Martin, Montreal; Ontario, H. A. Bruce, Toronto; Manitoba, J. T. Lamont, Treherne; North-West Territories, G. A. Kennedy, Macleod; British Columbia, O. Morris, Vernon. Treasurer, H. B. Small, Ottawa. Executive Council, Jas. Stewart, T. G. Finley, J. M. M. Elder.

The Winnipeg meeting of the Canadian Medical Association will go down in the annals of the history of that Association as the best meeting ever held under its auspices. On the first day alone 130 members registered, and the total number at any time present reached 175, a number considerably larger than that at Ottawa last year, and second in point of numbers to the meeting at Toronto, in 1899. Many new members were elected, particularly from Ontario, Manitoba, the North-West Territories and British Columbia. Every province was

represented at the Association meeting, with the single exception of Prince Edward Island, one delegate coming as far as North Sydney, Cape Breton. The meeting was generally voted a pronounced success; and certainly the profession in Winnipeg and Manitoba, and the citizens of Winnipeg, more than eclipsed, in point of social functions, any previous meeting. The reception by the Board of Governors of the Winnipeg General Hospital, the reception by the ladies of Winnipeg at Wesley College, the special trip down to old Fort Garry, where Mr. and Mrs. Chipman extended their hospitality to the members and their wives and invited guests from Winnipeg, the visit to the Ogilvie Mills, the reception at Government House by Lieutenant-Governor and Mrs. McMillan, and the special trip out to Brandon through the great wheat belt of Manitoba, with the entertainment provided by the ladies of Brandon,—all will stand as a series of social functions which have never been surpassed, and will probably remain unsurpassed in the history of the Canadian Medical Association meetings. One of the best and most important discussions took place on the formation of a Medical Defence Union, and it is very gratifying to have to record that such an organization was unanimously supported by the Association. All the leading officers of this Protective Association are located in Ottawa, and Dr. Russel Thomas, of Lennoxville, P.Q., along with W. S. Muir, of Truro, N.S., is deserving of much praise for the great good work he has performed in this connection. Much regret was expressed at the resignation of the general secretary, Dr. F. N. G. Starr, of Toronto, who has so long and so faithfully, so ably and so energetically discharged the responsible and important duties of this position. At a time when the Association is so prosperous, it is due to the new general secretary that a united and earnest effort be put forth by all the members of the Association to continue that prosperity.

LONDON TUBERCULOSIS CONGRESS.

Dr. A. McPhedran, who was the only Toronto physician in attendance at the London Tuberculosis Congress, arrived home August 18th. He was seen at his home by a *Globe* reporter and while he accorded Dr. Koch the chief place in the assemblage, he was disinclined to give much weight to the theories put forward by the eminent German scientist. Dr. McPhedran said :

“It was a very large and very well managed congress, there being probably three thousand present. The discussions were very interesting and profitable. Of course, the most important

feature of the Congress was the announcement made by Dr. Koch. His conclusions, however, were not accepted by the great body of the Congress, as they were not supported by sufficiently conclusive evidence. His experiments went to show that the larger animals could only, with difficulty, be inoculated by the germs of human tuberculosis; but, of course, the evidence he could bring forward that human beings were not liable to be infected by bovine tuberculosis was, to say the least of it, not strong. Naturally, no evidence in the way of experiments could be produced, and conclusions will have to rest upon observations made in various parts of the world as to the effect on human beings produced by tuberculous food.

"It was the almost unanimous feeling of the Congress that so strong and definite a conclusion should not have been derived from the facts at hand, as they did not justify such positive opinions. It was also thought that in any case the law respecting the sale of diseased milk or food should not in any degree be relaxed. In view of the great importance of the subject, it seems the duty of the governments of all countries to make due provision for its thorough investigation. Doubtless in the near future much will be heard from various parts of the world on the results of the investigations that will be set on foot.

"As to the prevention and management of tuberculosis, the keynote of Koch's address, as well as of the proceedings of the Congress generally, was the necessity of pure, fresh air. The English profession particularly was practically carried away by the sanitarium treatment of consumption. They seem to forget that, with the great mass of humanity, it is impossible to give them the benefits of sanatoria, and that the same good can be obtained under judicious management at the homes, where the homes can be made healthful.

"Dr. Koch pointed out that in no other country had the reduction of the mortality from tuberculosis been so great as in Great Britain, where it had been reduced by about 45 per cent., and in no country was there such large provision made in the way of special hospitals for consumption. However, in no other country was there so many sanatoria in existence as in Germany, where life and sickness insurance contributes to the support of sanatoria.

"Many of the addresses and papers given were interesting and of great practical importance, and it is to be regretted that our sanitarium in Muskoka was not represented at the meeting. One danger, however, is that the profession as well as the public may in some measure lose their heads and attribute to sanatoria what belongs to fresh air and good sanitary conditions.

"It is not at all likely the authorities in England will relax in the least any of the precautions they take to prevent the

importation of diseased cattle or meat, and the Canadian people will be wise to observe the strictest precautions in the exportation of these products. Fresh air and clean sanitary surroundings are just as important for cattle as for human beings. The surest way to prevent the disease and to cure those that have it is to give them an abundance of fresh, pure air and fresh, clean, airy stables.

"At the closing meeting of the Congress many resolutions were passed, and among the most important were those that directed attention to the fact that tuberculosis is spread by impure air, and the dirty habit of expectorating in houses or in public places, on sidewalks or public conveyances, where the sputum may dry and be carried by the air so as to be inhaled. In many places it is made a punishable offence to expectorate in such public places. In a New York street car, for example, I observed a notice that spitting was punishable by a fine of \$5.00.

"From the social side the Congress was eminently successful, many of the leading people, as well as the profession, doing everything in their power to make the sojourn of the delegates in London both pleasant and interesting."

Dr. McPhedran said many of the States and towns of the United States were officially represented at the Congress, while Ontario was not.—*Toronto Globe*.

Editorials.

COMPULSORY REGISTRATION OF MIDWIVES IN ENGLAND.

There exists in England the "Association for Promoting Compulsory Registration of Midwives," of which the eighth annual meeting was held June 28th. The objects of the Association are the establishment by legislation of the proper training of midwives, and the supervision of their practice. The chief desire of the society is to have midwives properly educated, so that they may be able to conduct a normal case of labor; and also that they may be able to detect anything serious in the condition of the patient, and send promptly for a regular physician when he is required. As the law now stands we are told that any one, even though she be unskilled or disreputable, is allowed to place a plate on the door, and practise midwifery. Dr. Malins, Professor of Midwifery in the University of Birmingham, in a recent address expressed a hope that the time would come when "midwives will be duly trained, licensed, registered, and submitted to proper legal supervision and control. In the interests of suffering humanity, in the cause of the poor, and in the wisdom of a broad philanthropy, we cannot and we ought not to withhold opportunities of improving their knowledge." This high-toned grandiloquence is fine, if you refrain from looking at its ludicrous side.

It is difficult, so far as British medical journals are concerned, to get a fair conception of the arguments against licensing midwives. We understand, however, that some of the "masses" think that no laws should be enacted which will prevent poor women from obtaining friendly help from neighbors or ordinary midwives. Some physicians object because they may lose many guinea fees. Many at present acting as midwives fear that they might not be able to qualify. A certain number—we don't know how many—take higher ground, and say that partially educated women should not be given a diploma and license to practise midwifery after a three months' training, because such a short course is insufficient for the purpose. This

is about the only line of argument that we in Canada can thoroughly understand and properly appreciate. We do not consider it possible for a person in a course of three, or even six, months to become qualified to conduct an ordinary case of labor. Therefore we are entirely opposed to granting such half, or less than half, educated midwives a license to practise midwifery.

THE OBSTETRICAL SOCIETY OF LONDON AND THE EXAMINATION.

We have heard much about the action of this society, and the diploma it grants to midwives. We learn the following from the *British Medical Journal*. In 1872 a committee was appointed to consider the question. It was generally recognized that many midwives were ignorant and incompetent, and it was decided to institute an Examining Board composed of six Fellows of the Society to hold practical examinations and test the competency of the candidates to practise as midwives, and to give certificates to those who *passed*. The certificate contained the statement that in the opinion of the examiners the successful candidate was a skilled midwife, competent to attend natural labor. For certain reasons the certificate was changed in 1895 so as to simply state that the holder had "passed to our satisfaction the examination in midwifery instituted by the Obstetrical Society of London." On the certificate appeared the note: "This certificate confers no legal qualification to practice under the Medical Acts."

The chief among the regulations for the examination is the requirement of a certificate showing that the candidate prior to the examination has personally attended and examined at least twenty persons during labor, and has watched the progress of an equal number of cases (not necessarily the same) during the week following labor. There appears to be at present no regulation requiring a candidate to have attended a course of lectures, although the candidates usually do so. The examination consists of two parts—a written and an oral practical examination. Special training is given in numerous hospitals, the courses extending over varying periods

of from three to six months. The fees demanded at many of the hospitals are twenty-five guineas. At some of the maternities it is stated by the authorities that a good knowledge of the work can be obtained in from six to eight weeks. In other institutions they can take a pupil, and "finish her off in six weeks." We have only to state in connection with the great midwife work done by the Obstetrical Society of London that we quite approve of the note before referred to: "This certificate confers no legal qualification to practise under the Medical Acts."

NATIONAL SANATORIUM ASSOCIATION.

The Executive Committee of the National Sanatorium Association met on Wednesday, August 7th, at the Muskoka Cottage Sanatorium, Gravenhurst. The following were present: W. J. Gage, W. E. H. Massey, Hugh Blain, Dr. N. A. Powell, Secretary Walter James Brown, Superintendent Ambrose Kent, Architect D. B. Dick, and Dr. J. H. Elliott, the Physician-in-charge. The committee found the capacity of the institution severely taxed, a number of patients were occupying tents, and a number more were on the waiting list, as no accommodation could be provided for them. The physicians reported an increasing number of applicants in whom the disease was too far advanced for successful treatment.

The committee visited the building site of the Gravenhurst Free Hospital for Consumptives, which is located about half a mile nearer the town than the Muskoka Cottage Sanatorium. The mason work is well advanced, and from all appearances the building will be ready for patients by November 1st next. This new institution is to be supported by voluntary contributions.

The principal business of the meeting was to discuss the plans of the Toronto Home for Consumptives, submitted by Architect D. B. Dick. A part of the plan, of special interest to the medical profession, is to provide facilities for instructional purposes. At the present time the hospitals throughout the country do not make provision for the study of tuberculosis. The prospects are favorable for the early completion of

the Toronto building. Tenders will be invited as soon as possible, so that the entire work may be finished within the next few months.

HYSTERICAL RELIGION AND SCIENCE.

A short time ago we were introduced, in the daily papers of Toronto, to the doings and sayings of the advocates of Divine Healing. It will not be amiss to pass under review a few of the remarkable statements made at the gathering held in Munro Park a few weeks ago. In what we shall say we are aiming no shaft at anything that is good or worthy in religious thought; nor do we desire, in the least, to say a single word against the teachings of the Nazarene.

But there is a limit to all things. When men and women, who have paid no special attention to disease, and who know practically nothing about pathology undertake to descant upon these topics and the cure of disease, the public should be duly warned. It is an easy task for these people to shout about the wonderful cures they perform, but it is only reasonable to ask for proof. Their cases should be properly attested by competent physicians or surgeons before and after the so-called cure.

No doubt certain imaginary ailments have been cured in the past at the shrines of the old Greek and Roman gods, at the feet of the Egyptian sorcerers, and by the Indian medicine man who appealed to the virtue of some charm, or the Great Spirit on the top of the mountain, or to the white goat-skin nailed to the pine tree. From such circumstances and events grew up a belief in the efficacy of mysterious agencies in the cure of disease. What better could be expected in the days of Homer, when he speaks of the spleen as the seat of the mind and feelings, and as being surrounded by black bile?

One thing stands out as at once a refutation of the claims of Divine Healers: That we have never yet been furnished with proof of organic diseases being cured. If God is pleased to cure diseases by the methods of these healers, why is it that He does not save the life of some devout and lovely Christian character who is ill of cancer or granular kidney? Surely it cannot be alleged that God has only the power to cure functional

disorders, but falls short of that requisite for the organic affections! Further, it will not be contended by the most extreme Divine Healers that the proper degree of faith is only found among those functionally afflicted, but that none of those who have had cancers, or tumors of the brain, or sarcoma of the bones, have been able to appeal with such faith as to gain the ear of the Creator. It is not denied that the Creator has power to cure a cancer, but He only chooses to do so when proper means are employed.

If a person has been genuinely cured by faith, on any one occasion, of a real disease, there can be no logical escape from the conclusion that he can be cured again and again. In this way it can be shown that with the proper balance of faith he can live on forever. Each time he becomes ill he is cured, and so on *ad infinitum*. But more. The same faith that can cure can avert. He need never be ill. Nay, more. The same faith that can prevent diseases and cure them, can maintain perpetual health, perpetual youth in the tissues. They neither wear out nor die out. On their own ground these mistaken people are driven into the *reductio ad absurdum* of establishing God's law, man is mortal, as a fallacy!

Returning to the recent convention, one person was claimed to have been cured of consumption, but there was no proof of the bacilli being found. Another person had some trouble with his voice. We all know how often this is a mere form of hysteria, or passing nervousness, especially about the age of puberty, when the trouble began. A third case was that of a person who had a terrible eruption on her face. She was in a hospital for a time. In a short time she got well. What have we here? Does not every physician see the ear marks of some dermatitis that got well, and very likely largely through what was done for her in the hospital. And yet another had been cured of almost total deafness and threatened loss of voice. Hysterical deafness, blindness, aphonia, lameness, numbness, vomiting, *et al*, are not new. They were present in the siege of Troy, during the days of the Jewish captivity, and among the fakirs in the Buddhist temples. But, *mirabile dictu*, this is not all. A tooth was pulled and there was hemorrhage. The elders are called in. At this juncture the artery contracts and retracts and closes by a blood-clot, just as happens in the foot

of a tom cat, or in the scalp of a Dyak of Borneo, who is not supposed to pray nor to call in the elders of his church. One other person had brain disease, heart disease, nervous debility and indigestion. A grand quadruple alliance, but such as at once declares its nature as not nearly so formidable as a little bit of a tubercle in the supra-renal glands, and much more amenable to the influence of a fanciful mind over some fanciful symptoms that led the person to think she had four grave diseases.

When and where is all this wild ignorance to end? Is it not about time that persons who do not study diseases should cease preaching upon them? Surely, it is not too much to ask that those who are guided by sound methods of Biblical criticism should denounce all such visionary and wrongful applications of holy writ. If there is anything laid down in the New Testament with greater emphasis than another, it is to make due use of the means at our command.

What about the child that is too young to pray, or has not got praying parents? Or what is to be the fate of the man ill with pneumonia or typhoid fever, where there is too much stupor for him to place faith in any subject or person? Must the man who is rendered unconscious by a blow on his head receive no treatment because, in his helpless torpor, he is totally oblivious of his own existence or the existence of anything else? A child is ill with diphtheria. Are the onlookers to pray or to send for a competent physician who can administer the antitoxine, or other proper remedies? These misguided people are guilty of a grave offense against society by propagating erroneous opinions.

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Among the many societies of specialists in medicine and surgery which have come into existence during the last few years in the United States, we know of none that has met with greater success than the Southern Surgical and Gynecological Association. That success, as is well-known, has been largely due to the untiring and unselfish efforts of one of the most eminent surgeons of the "Sunny South," Dr. W. E. B. Davis, of Birming-

ham, Alabama, who was one of the founders of the Association, and for thirteen years acted as its secretary. We have received a copy of the transactions of the thirteenth annual meeting, held last November, at Atlanta, Georgia, and learn from it that Dr. Davis has resigned, and Dr. W. D. Haggard, jun., has been elected in his place.

Dr. Davis, in replying to a very cordial vote of thanks, pointed out that the society was organized to give the surgeons of the South a chance to come to the front. It had grown and expanded to such an extent that it is now a Southern association only in name. Men from all, or nearly all, parts of the United States have become members; but its meetings are held in the South, and its officers are Southern men. He concluded by making pleasant references to his successor, whom he designated a scholarly, ambitious and worthy man—a son of one who did more than any other member in the interests of the organization, especially in its early days.

THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

In this association we have another instance of an organization which owes its success largely to the indefatigable efforts of its distinguished Secretary, Dr. Wm. Warren Potter, of Buffalo. The last meeting was held in Louisville, Kentucky, in September, 1900. We find from a copy of the transactions just received that the meeting was one of the most successful in the history of the society. One of the ablest and most interesting papers presented was that by Dr. Henry Howitt, of Guelph, on "Perforated Gastric Ulcer," with notes on four cases. He expressed an opinion that in some cases it was advisable to operate before perforation occurs. In order to avoid any misconception as to his views in this connection, we will quote his own words: "It is far from my desire to be put on record as an advocate for operative measures in all cases of gastric ulcer before perforation, but I would certainly not hesitate to advise it to a patient whose life has been made miserable for a long period by the disease, especially if he has frequent attacks of gastralgia, and more or less interference

with the calibre of the pyloric orifice. In such, and other grave conditions due to the trouble, I cannot comprehend any valid objection to at least making an exploratory incision, and, if possible, relieving the condition." The next meeting of this association will be held in Cleveland, Ohio, September 17th to 19th inclusive, under the presidency of our genial friend from Alabama, Dr. W. E. B. Davis.

CANADIAN MEDICAL ASSOCIATION.

There appears to be only one opinion about the recent meeting of the Canadian Medical Association held in Winnipeg—it was in all respects good. It was probably the most representative meeting that the Association has known. All sections of the Dominion were well represented. This was as it should be. Never were greater efforts put forth by the local profession of any city or province in making the preliminary preparations. Never did a president use his personal influence to better purpose. Never was a response to an invitation to attend any meeting more hearty than that given by the visiting members on this occasion. We have much pleasure in publishing a report in this issue.

The next meeting of the Association will be held in Montreal, under the presidency of Dr. Francis Shepherd. Montreal has always given a loyal support to our National Medical Society, and the meetings held there have always been good and interesting. Those who attended the Montreal meeting of the British Medical Association will never forget how the citizens of that city, both medical and lay, shine as hosts. We congratulate Dr. Shepherd on his election to the presidency. The general feeling in this part, and probably in all parts of Canada, is that no better choice could have been made.

Among the physicians from the west that travelled east were Drs. Tunstall and Lefevre, of Vancouver, and Dr. Jones, of Victoria, who spent a few days in Toronto. We learned from them that the profession of those two cities on the Pacific Coast are very anxious to have a meeting of the Association in British Columbia in 1903. They expect to extend a very cordial invitation to the Association at the Montreal meeting of 1902.

UNIVERSITY OF TORONTO—SENATE ELECTION.

The following are the names of all candidates who have been nominated by the graduates in medicine, and who alone are eligible for election by such graduates :

WILLIAM HENRY B. AIKINS, M.D., of the city of Toronto.

IRVING HEWARD CAMERON, M.B., of the city of Toronto.

JAMES METCALFE MACALLUM, M.A., M.D., of the city of Toronto.

ADAM HENRY WRIGHT, B.A., M.D., of the city of Toronto.

In accordance with the University Act, 1901, s. 29 (2), no ballot is required for the election of representatives of graduates in medicine, and accordingly those named will be reported to the Senate as elected by acclamation.

—*Extract from official circular issued by James Brebner, Registrar.*

Mr. Riddell and Judge Street are elected by acclamation to represent the graduates in law, and Mr. C. H. Mitchell is elected to represent those in Applied Science and Engineering. Nineteen candidates are nominated by Arts graduates (twelve to be elected), and thirteen by the graduates of Arts and Science of Victoria College (five to be elected). Votes are to be given by closed voting papers delivered to the Registrar at his office, between the hours of ten o'clock in the forenoon and four o'clock in the afternoon, on any day between the second Wednesday of September and the first Wednesday of October (both days inclusive). No voting paper shall be counted which has not been furnished by the Registrar.

Personals.

Dr. C. J. Alloway, of Montreal, visited Toronto September 5th.

Dr. G. S. Bingham, of Toronto, returned from Europe, September 4th.

Dr. Donald McGillivray left Toronto August 19th for a trip to the Upper Ottawa.

Dr. Harold W. K. Anderson, Victoria, B.C., was married to Miss McCosh, July 15th.

Dr. Allen Baines, of Toronto, returned August 14th, after a trip to Boston and New York.

Dr. Murray McFarlane, of Toronto, returned from a trip to the Pacific Coast, August 24th.

Dr. John Archibald Marquis, of Brantford, was married to Miss Buckingham, August 14th.

Dr. Robert J. Dwyer, of Toronto, has moved to 404 Bloor Street West and resumed practice.

Dr. W. A. Young, of Toronto, returned August 13th after spending a holiday at Atlantic City.

Dr. W. W. Ogden returned to his home in Toronto, August 6th, after a visit to the Georgian Bay.

Dr. R. Barrington Nevitt, of Toronto, left for a two weeks' trip to Quebec in the latter part of July.

Dr. W. E. Struthers (Tor., '97,) leaves for Europe this month to spend one year in post-graduate work.

Dr. Beattie Nesbitt, of Toronto, spent the month of August at the Queen's Royal, Niagara-on-the-Lake.

Drs. E. A. Spragge and E. A. Peaker, of Toronto, spent a portion of the summer at Windermere, Muskoka.

Dr. Charles Sheard, of Toronto, went to New York and Newport for a holiday trip in the latter part of August.

Sir William Hingston, of Montreal, after spending a holiday in England left London for his home August 22nd.

Dr. C. B. Shuttleworth, of Toronto, left, August 25th, for Europe, where he will spend one or two years at post-graduate work.

Dr. W. B. Geikie, of Toronto, spent a portion of the summer in Prince Edward Island. He returned to his home August 12th.

Dr. Harry B. Anderson, Professor of Pathology, Trinity Medical College, Toronto, was married to Miss Northway, August 14th.

We are pleased to be able to announce that Dr. Frank J. Farley, of Trenton, has quite recovered from a severe attack of typhoid fever.

Dr. R. M. Coulter, Deputy Postmaster-General, after spending a well-earned holiday at his old home in Aurora, returned to Ottawa August 12th.

Dr. E. D. Carder, Toronto, a Toronto General Hospital house physician of last year, has been appointed surgeon to the C. P. R. steamer, *Tartar*.

Dr. P. H. Bryce returned to his office August 1st after a visit to Muskoka. He reports great improvements in the sanitary condition of cottages and hotels in that district.

Dr. A. A. Knox, a graduate in Arts and medicine of the University of Toronto, who has spent the past year at post-graduate work, has returned to Canada. He reached Toronto August 13th.

Professor Wm. Osler, of Baltimore, spent the greater portion of August in North Berwick, Scotland. He expected to spend a few days in London, and then return to Baltimore about September 15th.

Dr. W. T. McArthur, (Tor., '95) of Los Angeles, California, has recently returned from Edinburgh, where he was admitted to Fellowship of the Royal College of Surgeons. He paid a short visit to Toronto early in August.

Dr. Thos. S. Cullen (Tor., '90), of Baltimore, was married, August 22nd, to Emma Jones, daughter of the late Dr. Beckwith, of Indiana. Dr. and Mrs. Cullen passed through Toronto, August 24th, on their way to Winnipeg.

Dr. Thos. B. Fitcher (Tor., '93) is practising in Baltimore. Although he has ceased to be a resident of Johns Hopkins, he still retains a connection with that hospital, having been appointed Associate Professor in Medicine.

Dr. A. McPhedran, of Toronto, during his recent visit to England, attended the Tuberculosis Congress in London and the meeting of the British Medical Association. Some of his remarks on the former will be found on page 514, clipped from the *Toronto Globe*. Dr. A. McPhedran, has retired from general practice and is devoting himself entirely to consultation work.

Dr. Chown, of Winnipeg, paid a short visit to Toronto about the middle of September.

Dr. Charles O'Reilly, Superintendent of the Toronto General Hospital, attended the annual meeting of the American Association of Superintendents of Hospitals, New York, September 10th, 11th and 12th, and was unanimously elected Vice-President.

Dr. Price-Brown's book on "Diseases of Nose and Throat" must be growing in popularity. Last year it was placed on the list of text-books of the University Medical School and Trinity Medical College. This year, in its annual announcement, the New York Polyclinic has also entered it upon its list of acknowledged text-books.

Dr. Arthur E. Ross, a graduate in Arts and medicine of Queen's University, who went to South Africa with the second Canadian contingent as hospital sergeant, and some time after his arrival was appointed surgeon to the Royal Canadian Dragoons. He remained in South Africa until June last, when he returned to Canada. He visited Toronto August 7th.

Dr. Bruce Riordan, of Toronto, and Dr. Hutchinson, of Montreal, left early in August on a trip to the Pacific Coast. They visited first San Francisco, where they were the guests of Mr. E. H. Fitzhugh, General Manager of the Southern Pacific Railway. They then went north to Victoria, and returned east by way of Vancouver, Banff and Calgary to Winnipeg, which city they reached in time for the meeting of the Canadian Medical Association.

Thos. McCrae, B.A., M.B. (Tor.), has been appointed Senior Resident Physician Johns Hopkins Hospital, Baltimore, in the place of Dr. Thos. Fletcher, resigned. Dr. McCrae went to London, England, in June, and at once went up to the examination for membership of the Royal College of Physicians, and passed. He returned in August, and passed through Toronto, August 26th, on his way to his old home, Guelph. After four days he returned to Baltimore.

Obituary.

MR. JOHN C. CARLAW.

We announce with deep regret the death by drowning, August 8th, of Mr. John C. Carlaw, of Parkdale, a third-year student of Trinity Medical College, Toronto.

MR. ARTHUR INGLESTROM WOOKEY.

Mr. A. I. Wookey, a bright and promising student of the fourth year in the Medical Faculty of the University of Toronto, died at St. Michael's Hospital, Toronto, September 2nd. The cause of his death was meningitis, following typhoid fever.

OVERTON F. MACDONALD, M.D.

Dr. O. F. Macdonald, who had been in practice in Toronto for thirteen years, was in poor health for some time, his mind suffering as well as his body. His friends were greatly shocked and grieved to learn that he committed suicide August 7th, shooting himself through the heart. He was 39 years old, and left a widow and one child.

DR. JOHN BARNHART.

Dr. Barnhart was one of the oldest practitioners in this country. He received his license from the old Medical Board in 1834. He practised for many years in Streetsville, but removed to Owen Sound about twenty-five years ago, where, notwithstanding his advanced age, he was engaged in practice until recently. He died in Toronto at the residence of his son-in-law, 7 Ross Street, August 9th, aged 88. He received his general education in the Royal Grammar School, of Toronto, and the greater part of his medical education in New York. He was, however, for a time a student of the late Dr. Widmer, and acted as his assistant during the cholera scourge of 1833.

Correspondence.

THE BIRTH OF A SOUL.

To the Editor of the CANADIAN PRACTITIONER AND REVIEW :

SIR,—A clear and simple definition of the Anglo-Saxon word Soul is essential to a full and complete comprehension of our subject. Soul is Anglo-Saxon, and is synonymous with mind. Mind is derived from the Sanscrit and means, to think. The soul, then, is that which thinks, and is the vital principle which constitutes our life and being. It is a part of, and essentially of the same nature as, the universal soul or life. It is also the intelligent principle which reasons, wills, designs and exercises memory and judgment. It is susceptible of being influenced by the spiritual and material environment, and is the centre from which emotions radiate. It is a spirit and non-material, and therefore possesses neither shape nor form. It becomes manifest by clothing itself in matter, which it would seem was created for that purpose. It develops an individuality from environment, but never ceases to be indissolubly a part of the universal soul. It is therefore immortal.

According to the Bible, God made man out of the dust of the earth; and when all the complex organs, internal and external, had been perfected, He breathed into the cold, clayey nostrils the breath of life, and the image became a living soul.

The philosopher Plato, as well as some of the early Christian fathers, including Origen, believed in the pre-existence of souls; but in the sixth century the Church condemned this belief; and theologians now assume that the souls of mankind are the progeny of the special and distinct creation to which I have referred.

Let us try to see if exact science and knowledge can be made to sustain this assumption.

Man, like all other animals and reptiles, has his beginning in a minute particle of matter known as protoplasm, a chemical compound of carbon, oxygen, hydrogen, nitrogen and phosphorus. This particle of protoplasm develops into an egg, or ovum. The human ovum originates and is developed in small sacs known as graafian follicles, which are situated in and just under the surface of the female ovaries; and if we care to examine the living follicle microscopically, we may see the work of egg production beautifully and wonderfully exemplified.

The first stage in the process of ova development consists in the secretion of a particle of granular fluid by the lining mem-

brane of the graafian follicle. This fluid is known as undifferentiated protoplasm; it is a living fluid, and differs from artificial protoplasm in being contractile, irritable, receptive, secretory, respiratory and reproductive. In other words, it is a living product of living tissue. In some part of this particle of fluid protoplasm, an opaque spot is soon seen; this is known as the germinal spot, or nucleolus. Soon a network of fibrillæ is seen radiating from the nucleolus through the surrounding fluid. This fluid is known as the germinal vesicle and is readily distinguished by its transparency from the yolk in which it is suspended. The thick, transparent envelope which surrounds the yolk is known as the zona pellucida. The ovum is now mature and awaits the rupture of the graafian follicle, which permits it to escape and to commence its brief, or otherwise, life's career.

At the moment of its expulsion from the graafian follicle, it is seized by the fimbriæ and conveyed into the fallopian tube, through which it passes into the uterine cavity where, if it have not yet done so, it may meet the spermatozoa on their undulatory and vibratory journey upwards. If there are no spermatozoa *en route*, the ovum dies and is cast off. Why, we may ask, does the ovum, failing to meet the spermatozoa, cease to exist? We may assume that it was living and vigorous when it left the ovary, and that had it been properly nourished in transit, it would not have arrived *in utero* a starved and famished weakling, with hardly a spark of vitality left. Such, however, is the condition of most ova when they arrive *in utero*, and we cannot say positively whether or not nature intended to have the ova impregnated and fertilized while lying in the graafian follicle, immediately after expulsion therefrom, or while they are in transit through the tube. It may occur in any of these locations.

In virgins, it would seem, all ova inevitably die. Yet it is conceivable—no pun meant—that an ovum may be developed of such robust vitality that it may arrive *in utero* strong, vigorous and healthy, attach itself to the endo-metrium and evolve an embryo. This would be an instance of parthenogenesis. Such a conception, however, rests on the assumption that the living ovum is a distinct organic entity, and that the spermatozoa are not essential to the perpetuation of its life.

The spermatozoon, like the ovum, consists of protoplasm and possesses ameboid properties. Its vitality is intense; and its purpose and function seems to be to stimulate, invigorate and nourish the less vigorous and insufficiently rationed ovum. The spermatozoon, also, dies unless it meets an ovum; but should it meet an ovum, it penetrates its enveloping membrane in an ameboid fashion, and gives up its life, substance and identity

to save the dying ovum and perpetuate the race. The ovum or germ cell, and the spermatozoon, or sperm cell, then, are mutually dependent on each other for their preservation and perpetuation as two in one.

Both the germ cell and the sperm cell are particles of living matter, yet it is only when the one is absorbed by the other, that a human soul is brought into existence. Does the union of these two living cells generate a soul spontaneously, or does each individual cell contain the fragmentary elements of a soul whose only aim and thought is to become united with its opposite complement and become a whole souled being? But let us assume that the ovum possesses a whole soul; then it must follow that it got it while it lay in its little nest in the ovary from the female owner of the ovary. If this be so, does the spermatozoon possess a soul too, or only life? But my contention is, that life is synonymous with soul. Therefore the wedding of the weakling souls of the ovum and spermatozoon gives birth to a strong and vigorous soul endowed with the potentiality and intelligence necessary to incarnate itself in human form.

J. BAUGH, M.D.

Hamilton, July, 1901.

HOSPITAL VS. PRACTITIONER.

Editor of CANADIAN PRACTITIONER AND REVIEW.

SIR,—For many years it has been the custom with most hospitals to provide free medical and surgical attendance to the patients who paid \$2.80 for their bed. This is entirely wrong. The hospital should decline to do more than give a bed and hospital attendance to those who are not within its walls in the form of paupers.

A man has a good farm and a large stock. He could not by any means obtain the certificate of his municipality for free hospital maintenance. He goes to some city or town where there is good hospital accommodation and pays \$2.80 a week. This, in many instances, carries with it free medical and surgical attendance. By this means some member of the medical profession is cheated out of his fee. There is not a single argument in favor of such a course.

The only patients that should be regarded as the wards of the hospital are those who come to it as paupers. If a man chooses a cheap bed in a hospital, that is no reason why he should receive free treatment any more than if he took a cheap room in a hotel. When a person goes into a hospital and pays his own way, the arrangement for his medical and surgical treat-

ment is entirely a matter for himself to make. The hospital should assume no responsibility in this matter, when the person does not come to it as a pauper. A person who pays for his own bed has no claims on the hospital corporation for his treatment.

I call upon the medical profession to put an end to this abuse. If a person goes into a hospital and pays \$2.80 a week because this is all he can afford, he will have no difficulty in arranging with some practitioner for his services. This responsibility should always rest with the patient. But when it comes to free attendance upon persons who are well able to pay, a gross injustice is done the medical profession by the hospital which has a rule calling upon its staff to give free attendance on those who are not paupers. I go further and say that members of the profession are doing their fellow-practitioners a wrong when they consent to act on a hospital staff under such conditions. I am glad to state that some hospitals act properly.

GENERAL PRACTITIONER.

Book Reviews.

Saunders' Medical Hand Atlases—Atlas and Epitome of Ophthalmoscopy and Ophthalmoscopic Diagnosis. By PROF. O. HAAB, Director of the Eye Clinic in Zurich. From the Third Revised and Enlarged German Edition. Edited by GEO. E. DESCHWEINITZ, Professor of Ophthalmology Jefferson Medical College, Philadelphia. With 152 colored lithographic illustrations, and 85 pages of text. Philadelphia and London: W. B. Saunders & Co. Toronto: J. A. Carveth & Co. 1901. Price, \$3.00 net.

Professor Haab's atlas has long been recognized as a standard in Germany and in England. The latest German edition translated, edited and published in America is now before us. The book is in two parts. The first part may be spoken of as the epitome of ophthalmoscopic diagnosis. It gives full consideration as to the best methods of using the ophthalmoscope; indicates how to conduct an ophthalmoscopic examination; gives descriptions of the fundus oculi, or "eye ground," normal and pathological, and, as it were, lays the foundation for the proper use of the plates. The second part is the Atlas proper. It consists of 152 colored plates. These plates represent almost every condition of the fundus likely to be seen by any one using the ophthalmoscope; and they reproduce the appearances so perfectly as to render easy the recognition of the conditions. In regard to these lithographs, it is no flattery to say that they are as well executed, and as life-like, as those in the more expensive volumes. The publication of this volume is opportune, for few practitioners care to invest much money in an expensive atlas which is rarely used. Here we have a book at moderate cost, and so good as to be simply indispensable to every one who can use an ophthalmoscope, unless he is already provided with a good atlas.

Saunders' Question Compend—Essentials of Refraction and of Diseases of the Eye. By EDWARD JACKSON, A.M., M.D. Third Edition. Revised and Enlarged. 261 pages, 82 illustrations. Philadelphia and London: W. B. Saunders & Co. Toronto: J. A. Carveth & Co. 1901. Price, \$1.00.

That author who undertakes to convey a good knowledge of any subject by means of question and answer must have a very thorough grasp of the essentials of that subject. Dr. Jackson, Emeritus Professor of Diseases of the Eye in the Philadelphia Polyclinic, evidently has such knowledge of his subject. The facts communicated in this book are clearly and forcibly put, the illustrations are good, the lines of treatment put forward are reliable, and the ground is covered as well as it is possible to do in a book of this size. To those who desire to study the subject by this method the book may be recommended.

J. T. D.

Selections.

The Relation of Bovine to Human Tuberculosis.

An unusual flutter has been caused in the medical profession, as well as in scientific circles generally and among the laity, by the declaration of Professor Koch at the London Congress of Tuberculosis, that it is impossible to transmit bovine tuberculosis to the human subject. This idea, which is by no means original with Professor Koch, is based on certain researches he has recently conducted, in which he found it impossible to infect cattle with the sputa or the bacilli from cases of tuberculosis in man. The lay press, with characteristic eagerness to create a sensation when news is scarce, have accepted the learned Professor's opinions as absolute statements of fact, and, in consequence, have drawn hasty conclusions and have indulged in much absurd comment wholly unwarranted by the data brought forward by the observer. It is always unsafe to accept the dictum of any investigator, no matter how eminent, unless substantiated by positive evidence. While any opinion expressed by so competent an authority as Dr. Koch is worthy of all respect and of careful investigation, it would be exceedingly unwise to accept it as oracular. The medical world cannot forget the unpleasant reaction and the discredit to medicine that followed his premature announcement of a cure for tuberculosis a few years ago. Moreover, since the tuberculin *fiasco*, Koch's contributions to medical science have not been such as to re-establish him in the full confidence of the profession, and many regret that he did not allow his fame to rest on the sure foundation of his splendid achievements earlier in his career.

In his investigations into malaria and Texas fever, he showed a tendency to arrogate to himself credit for discoveries in which others had preceded him many years, and this disinclination to give due credit to fellow-workers in the field of Science has been particularly resented on this side of the Atlantic. Besides, what is now heralded in the secular press as an epoch-making discovery—that man is insusceptible to bovine tuberculosis, was suggested by Theobald Smith and others some years ago, but in the guarded and dignified manner of careful investigators. From the impossibility of using human subjects for experimental purposes, there is no direct proof forthcoming that man cannot be infected by the organisms of bovine tuberculosis. Because he found it impossible to produce the disease in animals by inoculating them with the germs of human tuberculosis, Koch concludes that the diseases in man and cattle are entirely different, and, therefore, reasons apparently by analogy, that man is not susceptible to bovine tuberculosis. Such

evidence certainly does not establish his contention, and will not convince. So far as weight of authority goes, he is opposed by the general opinion of the Congress at which his paper was read; by Virchow, Professor McFadyean, and certainly by the majority of clinicians in all parts of the world. The matter must still be considered one of the unsettled problems in medicine. The general interest stirred up by Koch's announcement will undoubtedly stimulate research in the matter, which is probably the greatest result that will follow on what he has said.

To jump, from Koch's opinions, to the conclusion that all the restrictions heretofore placed on the sale of the milk and meat of tuberculous animals are entirely unnecessary, and that there is no danger to be feared from the consumption of these articles, is an absurdity for which it would be unfair to hold him responsible. No doubt a little sober second thought on the part of those who expected an upheaval in the present sanitary regulations, with a repeal of the laws passed for the public protection, will convince them that, be the outcome of further investigations what they may, milk and meat from animals suffering from tuberculosis or other diseases will never be either safe or desirable for human food. Too thorough and stringent precautions can never be taken to insure that such potent carriers of infection reach the consumer in as pure and wholesome a condition as possible.

Considering the ill effect of the heat of the dog days, the medical profession can well afford to smile at the silly clap-trap in the way of editorial criticism offered by some of the lay press in reference to the alleged unnecessary precautions against tuberculosis upon which we have insisted for many years.—Editorial, *Canada Lancet*.

Enema after Abdominal Operations.

At the Boston City Hospital following abdominal sections it is seldom that cathartics of any kind are employed by the mouth. During the first twenty-four hours no attention to the unloading of the bowels is usually given. Then, no voluntary action having taken place, an enema, high into the rectum, is given, consisting of the following:

R	Epsom salts	(50% sol.
	Turpentine	
	Glycerine	aa. $\frac{3}{4}$ ii.
	Water	$\frac{3}{4}$ vi.

The injection is held in the bowel as long as possible by the patient.

It is well to anoint the inner thighs and buttocks in order to prevent irritation of the parts should they come in contact with the turpentine by mischance.—*Clinical Record*.

The Canadian Practitioner and Review.

VOL. XXVI. TORONTO, OCTOBER, 1901. NO. 10.

Original Communications.

ADDRESS ON SURGERY.*

BY DR. JONES, VANCOUVER.

Mr. President and Gentlemen :

My first duty is to express my appreciation of the honor which you have conferred upon me in selecting me to deliver the Address on Surgery.

Having undertaken to give this address, I must ask you to forgive me for failing to bring before you anything original. The inhabitants of Western Canada are not afflicted with surgical diseases differing from those in Eastern Canada. There may be this difference, that they are more impatient than the eastern people when they are afflicted with any disease. They always expect and desire to be treated by the most radical methods, however severe they may be. They have no time for palliative treatment. They become reckless, and wish to be relieved of their suffering rapidly. It may be that the life they lead in the mountains, full of hardships and dangers, tends to dispel all fear of death. It has often astonished me to see how little perturbed some of these people are when they are told that they are suffering from dangerous conditions, such as cancer of the rectum, tongue, or stomach, which necessitates a severe surgical operation. Without a murmur they consent to anything you suggest. They go to the hospital then and there, and face their operation as if it were an ordinary everyday occurrence.

As an example of the strange ideas that the public have on this subject, I might quote the following letter, which is a fact:

"Dear Sir,—I hear that Mr. Briggs, one of my lodgers, is to be operated upon on Wednesday, and I shall be much obliged

* Delivered at the meeting of the Canadian Medical Association.

if you will postpone the operation until Friday, as my daughter is to be married on Thursday, and we do not want the corpse home until after the wedding."

This fearlessness is often coupled with an ignorance that demands surgical treatment where only medical is justifiable. The treatment is too slow to bring about the desired results, and they frequently ask, "Don't you think an operation will cure me?"

Operative surgery has increased to an enormous extent during the past few years. The wonderful results which have been achieved since the introduction of aseptic surgery; the improved diagnosis of the early stage of cancer in all parts of the body; the absolute safety with which operations are undertaken for the relief of deformity and disease, have given the public every confidence in surgical treatment.

One of the most useful of the recent advances, as a means of diagnosis, is the X-ray photography. When first introduced, its use was limited to the finding of bullets, needles, and pieces of metal embedded in the body, also to the direction and condition of all varieties of fracture, and to the localization of calculi in the kidney and bladder. Its uses are now further increased. It is employed for the detection of tubercular deposits in the lungs, and pleural effusions can be distinctly seen with the displaced heart pulsating.

Improved methods of applying this photography have rendered its use so simple that in some hospitals nearly all fractures are looked at both before and after they are put in position. This is done by placing the patient on an ordinary canvas stretcher, the Crooke's tube is placed under the body, and a picture of the bones is thrown on a ground glass screen held over the patient's affected limb. In many cases this has saved the patient much suffering, and valuable time—when the soft parts are interposed between the ends of the bone, or in a riding fracture—as the fractures may have been cut down upon, the muscles, or loose fragments removed, and the bones brought into direct apposition.

Another advance, in the same direction, is Finsen's phototherapy—the method of treating local superficial skin diseases of bacterial origin by the concentrated chemic rays. It is the blue, violet, and ultra-violet rays of the spectrum that possess the most powerful action. This apparatus—which up to the present time is very costly—is installed at a few of the London hospitals, and the results in the treatment of lupus vulgaris and lupus erythematosus are said to be most satisfactory, as the scar remaining is soft, white, and healthy-looking.

The toxine treatment of disease has also aided us in surgery. What a difference there is to-day in the results from tracheo-

tomy in laryngeal diphtheria, when combined with the use of anti-diphtheretic serum! In my student days at the hospital, it was considered a good record for a house surgeon—who was allowed the privilege of performing tracheotomies when required—if he saved two out of ten cases. But in these days it is not uncommon to hear of six or seven successful cases in succession. A point upon which I lay stress is to perform the operation without administering an anesthetic. How often have we witnessed the little patient stop breathing before the operation was commenced! Consequently, I have thought that many of these died from depressing effects of the anesthetic upon a patient already saturated with the poison of diphtheria.

I wish to refer to the use of the anti-streptococcus serum in the treatment of streptococcus infection of wounds. Although its general use has been adversely reported upon, it does produce a marked beneficial effect upon certain cases.

Only very recently I was called in consultation to see a severe case of septic infection from a scratch over the knuckle of the right hand of a patient who had been attending to his child's ear, with otorrhea, and by some means had inoculated his hand. He had been ill four days before I saw him. I found him with his hand in a hot bi-chloride bath, the wound having previously been laid freely open. The temperature ranged between 104 and 105 $\frac{3}{5}$ for three days. The lymphatics on the inner side of the arm were marked out by red lines, and in three or four places along their course there were black, sloughy-looking patches. The arm was edematous up over the shoulder, but there was no sign of deep-seated suppuration. The finger-joints, wrist and elbow could be flexed without pain.

The question of amputation was discussed, but decided against. Quinine and stimulants were freely given and we decided to try the anti-streptococcus serum. It was injected over the shoulder night and morning, and the first dose seemed to benefit him; but it was not until he had received four doses that his temperature dropped, the swelling and inflammation began to subside, and the other symptoms to improve. From this time forth there was no rise of temperature, and with the exception of opening two small collections of pus in the course of the lymphatics, he rapidly recovered.

Its use in some septic puerperal cases has also been attended with very good results. Its administration in mixed infections has been proved to be useless. When first introduced, we had greater hopes of its possibilities, for we supposed it would be useful in cases of septic traumatic arthritis and other forms of suppuration.

Surgery, from the general practitioner's point of view, is becoming so vast a subject that it almost reaches beyond the

ability of one man to follow up its advancing steps. Cases of cerebral tumor and abscess are operated upon with success. Certain forms of cerebral hemorrhage are now being treated by surgical means, but so far with a very limited amount of success. The technique in operations upon the mastoid has been improved upon of late, for the mastoid cells and antrum are opened along the roof of the auditory canal into the middle meatus, and the diseased bones and ossicles removed if necessary. I recollect many troublesome cases of recurring mastoid suppuration that could have been treated once and for all by the present operations. (Stacke and Schwartze.)

The removal of large goitres and tumors of the neck can now be safely undertaken, even if the growths involve the internal jugular vein and common carotid artery on one side, as portions of these vessels are removed with the growth, without any ill-effects resulting.

The more radical and extensive operations in the cases of cancer of the breast have resulted in greatly improved statistics. As an illustration of the necessity of these measures, a few years ago I had under my care a case of scirrhus of the breast. It was just a small nodule about the size of a hazel-nut, embedded in the breast on the inner side of the nipple. I cut into it and found it to be a cancer. I then removed the whole breast and proceeded to clean out the axilla. There I found a chain of cancerous glands running up under the pectoral muscles towards the clavicle. This was a most deceptive case, because the local lesion was so small that one would have been tempted to just remove the nodule out of the breast, whereas the radical operation was really the only proper treatment.

Wounds of the heart have been sewn up: tubercular cavities and abscess of the lung have been opened and drained successfully. But of the various branches of surgery none perhaps to-day excites as much interest as abdominal surgery, and more particularly the diseases of the stomach. By its means many diseased conditions that were considered hopeless can now be cured or benefited. Every part of the alimentary canal, from the esophagus to the anus, with the exception of the duodenum, can be removed. Dr. Keen, in speaking of complete gastrectomy, says:

"In the hands of surgeons of exceptional skill and wide experience in abdominal surgery, the operation will be advisable in rare and favorable cases. At all events, it is of great interest to know that physiologically the stomach, as I may say is the case with almost all of our internal organs, is a luxury rather than a necessity."

My aim is in this address not to discuss the merits nor to give an historical account of these operations, which have been

so ably given by Dr. Keen in his Cartwright lectures, and by others, but to submit to you the deductions which I have been able to arrive at from my own experience in twenty-eight cases.

Much has been written of late upon the subject both in Europe and America. Mayo Robson, Bennett, Moyham, and Baker in England; Keen, Hemmeter, Curtis, Kammuer and others in America; and it was thoroughly discussed at the American Surgical Association in May, 1900.

In the early days of all new operations, the rate of mortality is generally very great, but this gradually diminishes as we learn the errors that we have fallen into—which in many cases could have been avoided had we been less timid in handling the particular organ. This I have especially seen in dealing with the stomach. Operators have completed what they thought should be done without thoroughly satisfying themselves as to the exact condition of the organ. Fatal results are sure to follow in cases of hour-glass contraction of the stomach, or perforating ulcers.

My first operation upon the stomach was in 1893, upon a case of pyloric obstruction. It was a most suitable case for operation. The patient was a wiry little woman of 60, with well-marked symptoms and a movable tumor felt a little above and to the right of the umbilicus. Senn's plates were used and an anterior gastro-enterostomy performed. After tying the silk sutures, I introduced a row of Lembert sutures with catgut around the junction. She suffered very much from vomiting after the operation, and quite suddenly on the third day she was seized with a violent pain in the epigastrium and died a few hours later. The result was not encouraging. I was unable to procure a post-mortem, and I attributed the failure of the operation to the use of catgut instead of silk ligatures, as I suppose they gave way or were absorbed too readily for the adhesions to have properly formed.

In December, 1892, Dr. Murphy invented his button. It was not brought prominently before the profession in England till 1895. This ingenious device certainly afforded a rapid means of performing an anastomosis, which formerly in inexperienced hands took an unduly long time to perform. The many uses to which it could be applied appeared to make gastric and intestinal surgery simple. The time occupied in performing an anastomosis by the older methods was often considerable, and added greatly to the shock that followed the necessary handling in operations upon the stomach. Unless the surgeon was unusually dexterous, his patient died before, or soon after, the operation was completed.

As a student, up to 1889, I witnessed several operations upon the intestines—such as re-section—performed by experienced,

dexterous and well-known surgeons; but seldom did a patient recover from the operation. The only operation I recollect performed for pylorotomy was done in 1883; a year or two after Billroth's successful case. Although the operation was skilfully done, the patient died of shock some hours later. For the remainder of my time at the hospital, up to 1889, I do not recollect hearing of, or seeing, a similar operation performed.

The introduction of Senn's bone plates and the Murphy button gave a great impetus to gastric and intestinal surgery. Between 1875, when Langenbeck successfully performed resection of the intestine, and 1890, when Senn introduced his decalcified bone plates, operations upon the intestines were rare. Since that date, the number has multiplied a hundred-fold.

The cases I have been able to collect from my notes include examples of nearly all the diseases of the stomach amenable to surgical treatment:

Gastrostomy: All for relief of malignant diseases of the esophagus, five cases.

Gastrotomy: For exploration of the stomach when no positive diagnosis could be made and prolonged treatment had failed to afford relief, four cases.

Gastro-enterostomy: For pyloric cancer, malignant ulceration of pylorus, gastric ulcer, and for extreme gastric dilatation, thirteen cases.

Pylorotomy: For pyloric cancer, three cases.

Gastro-plication: For hyperchlorhydria, one case.

Gastrolysis: For adhesion around pylorus, one case.

Perforating Gastric Ulcer: Hour-glass contraction, one case.

Perforating Duodenal Ulcer: One case.

I have included the latter in my list from its close proximity and from the similarity of its symptoms to acute perforating gastric ulcer.

Preparations for Operation: In all cases, the usual aseptic precautions are carried out; the skin shaved, scrubbed, and antiseptic compresses applied for twelve hours, if the nature of the case permit.

If the conditions are favorable and the patient not too feeble, a purgative is given to clear out the intestinal tract, the night previous to the operation; while, if the patient is emaciated and weak, he is fed by nutritive enemata, as well as by the mouth, for 48 hours previous to the operation. The stomach is washed out two hours before anesthetization. About one hour before the operation, 1-30 gr. strychnine is given, and half an hour later 1-6 gr. codeine, as this diminishes the amount of anesthetic required to produce narcosis.

Gastrostomy: In all five cases the operation was performed

for cancer of the esophagus. Witzel's operation was performed in four of the cases with very excellent results.

The Ssabemjew-Frank's operation was done upon one of the patients, who had a more than usually large stomach. It was equally successful; the patient could attend to himself with ease, and at no time was there any discomfort experienced from leakage—the oblique direction of the canal into the stomach preventing this occurrence in both operations.

In most of the Witzel's operations the patients wore the tube in the canal, more from the dread of the canal closing than from the real contraction that took place.

Gastrostomy was—in four of these cases—done only to give the sufferers temporary relief, which it evidently did accomplish. Unless the patient is moribund before the operation there is little risk in performing it.

These operations are easy of performance, and I have no doubt will be further simplified. In fact a modification by Mayo Robson of Ssabemjew-Frank's operation is completed by four stitches and the insertion of two hair-lip pins.

In Marwedel's operation, which is a further modification of Witzel's, the canal for the tube lies between the muscular and mucous layers of the stomach, and is said to give still better results; the canal shows less tendency to contract, and the operation can be more safely performed.

In one of the cases it was done for a stricture following a gumma that had destroyed a portion of the esophagus, leaving a fistula in the neck. At a later date I had intended performing a plastic operation to close it, but, unfortunately, malignant disease supervened upon the original trouble.

The prolongation of life in malignant disease ranged from 9 days to 8 months— $8\frac{1}{2}$, $4\frac{1}{2}$, 21 days and 9 days. The other case, which could not be classed as malignant from the first, lived 31 months ($2\frac{1}{2}$ years).

This operation, I am convinced, is justifiable in malignant disease, if for no other reason than for the relief of the distressing symptoms of hunger and thirst.

Gastrotomy: The four cases I have recorded are cases of exploratory gastrotomy, to determine the cause, if any, of the symptoms complained of.

The peritoneal cavity is opened above the umbilicus, and the contents of the stomach squeezed into the duodenum. The incision into the stomach I find most useful is a free opening 2 to 3 inches long over its middle third, parallel with its long axis. Through this—when the edges are held well apart, with the aid of a small electric exploratory lamp—nearly all the surface of the stomach can be seen. The finger can from this point reach almost any part of the cavity.

In my first case, I expected to find ulceration on account of the prolonged and intractable vomiting. We found no indication of disease, and in great disgust sewed up the wounds. Vomiting ceased the next day and has never recurred—now several years since the operation. She was a highly neurotic woman and had actually acquired the habit of being able to vomit at will, when the doctor or nurse was present.

In the second case, a cancerous, nodular tumor growing from the cardiac end of the posterior wall of the stomach, that could not be felt by palpation, was easily felt and found to be inoperable.

In the third case, adhesions caused great pain, and rendered the patient absolutely incapable of work.

In the fourth case, the symptoms were due to the constriction produced by two puckered scars on the pyloric end of the stomach, the result of former ulceration. The interior of the stomach was healthy. Gastroplasty was performed by sewing the incision up transversely to its long axis.

The result in Cases 1 and 4 was good. Case 2, it did not shorten life. Case 3 developed bronchitis and died—which is a risk every patient is subject to if he undergoes such an operation. From a *post-mortem* made in this case I found two small cicatrices—with otherwise healthy conditions of the stomach—which tends to the supposition that the breaking down of the adhesions would have resulted in a cure.

Pylorectomy: Performed in the manner described by Murphy is without doubt the simplest and most rapid method. It is a modification of Kocher's, differing from it by inserting one half of the button in the open end of the divided duodenum and the other half into a fresh incision made in the posterior wall of the stomach.

Rapidity of operation in these cases is a very important factor as regards their success; prolonged operations generally prove fatal.

Suitable cases for pylorectomy require that the cause should be cancer of the pylorus, when the growth is not too extensive and is free from involvement of contiguous structures, and the patient is not too feeble and cachectic. In these cases the shock received and the time occupied in performing the operation are not great. It was astonishing how rapidly the patients recovered from the operation.

All these cases were operated upon for cancer. My first—after which the patient lived only twelve hours—should never have been attempted. The man was too weak to survive any abdominal operation. He had practically been starved for weeks before admission and had not even strength enough to stand without assistance. Since my experience with this case,

and two other cases of the same kind that I performed gastro-enterostomy for and which terminated fatally, I have made it a rule that the patients must be able to stand up and walk without help; otherwise they cannot possibly survive the shock.

The other two cases lived on an average of over eleven months, and in both the growths returned in other organs. The duration of life in some of the recorded cases of pylorectomy reaches eight years and over. It is possible that some of these were really cases of pyloric ulceration with extensive infiltration of the adjoining parts. In one of my own, which I shall refer to later on, I performed posterior gastro-enterostomy because the adjoining structures were involved and a radical operation was out of the question. She is still alive, now three years since the operation, and the large mass felt previous to the operation has disappeared. This case, at the time of the operation, was thought to be pyloric cancer.

Gastro-enterostomy: Is the most frequent, most useful, and most simple of all the operations performed upon the stomach. The frequency of the operation is evident when we think of the number of conditions under which it is done—pyloric cancer, pyloric ulceration and stenosis (non-malignant), gastric ulcer, dilatation of the stomach, and for intractable chronic dyspepsia and hyperchloridia.

Its usefulness is beyond question; the relief it affords in all these conditions is striking, and in some absolute. Nothing can be simpler than this operation, performed with a Murphy button; and considering the relief it gives it should be more frequently and earlier resorted to. Personally, I have used this method in fourteen cases, and in only one of these was there any drawback to its employment—and that was in a case where the button fell back into the stomach. In my two patients who died from the shock, I examined the lumen and found it perfect.

In intestinal anastomosis I have not found the button so successful, as in one case, the lumen of the button became completely plugged with feces, which produced great dilatation of the proximal portion of the intestine, leakage, and death. In several other cases I have had leakage, but as I generally make a point of bringing the anastomosed gut into one or other loin, and place a drain on both sides of the gut, the general peritoneal cavity becomes walled off in three or four days, by which time a fistula will have formed. This fistula closes without operation in a week or two. Contraction of the orifice has not followed any of the operations up to the present.

In the earlier operations, the intestine was united to the anterior wall of the stomach (Wolfer); but, unfortunately, by

this method the button is more liable to fall back into the stomach, as I have previously mentioned,

As to the other difficulties which are likely to arise from an anterior gastro-enterostomy, such as regurgitation of the contents of the stomach back through the jejunum and duodenum, carrying with them the contents of the common bile duct, producing fatal vomiting, and the jejunum, pressing on the transverse colon, causing intestinal obstruction, I have fortunately not met with any, and reported cases are rare. Mr. Mayo Robson, in his "Address on Surgery of the Stomach," still prefers anterior gastro-enterostomy, either by simple suture, or by the aid of his bone bobbins.

Posterior gastro-enterostomy (Van Hacker) has undoubtedly been the better operation; the position of the patient in bed favors the passage of the button, which is not so liable to fall back into the stomach, and allows the more ready escape of the contents of the stomach. This operation is as easy to perform as the anterior gastro-enterostomy. The danger of infection is greatly minimized if the purse-string sutures are inserted both in the stomach and intestine before making any opening into either of them (according to the rules laid down by Dr. Murphy). This operation is so well described in any book treating upon this branch of surgery, that it would be superfluous for me to do so in this address.

Finding the jejunum does not present the difficulties that some surgeons would have us believe. This is readily found after pulling up the omentum and transverse colon; then, by passing the hand along the meso-colon to the left of the spine, find the upper border of the mesentery of the small intestine, and close by, the jejunum can be felt, or to make sure, seen, emerging from the side of the spinal column. If you rely upon touch, follow it forward for ten or twelve inches, and then back again to the spine.

Should the opening made in the meso-colon be too large, close it with a few stitches to avoid a loop of intestine slipping through it, as Dr. Keen suggests.

The passage of the button has taken from fourteen days to four months. The delay in its travel has not given rise to any unpleasant symptoms in any of my cases.

For inoperable pyloric cancer, this operation only prolongs the patient's life and makes it more endurable by relieving him from constant pain and vomiting. He eats and sleeps well after the operation. Some surgeons have gone so far as to say that unless pylorotomy can be done, gastro-enterostomy is not justifiable. This, happily, is not the opinion of the majority of surgeons; for the relief, although only temporary, justifies the procedure. And if, when we open the abdomen, we see that by

very little additional risk we can place the sufferer in a more comfortable state, I think we should do so.

Again, in some cases we may be mistaken as to the character of the growth, as in this case referred to in pylorotomy.

A woman aged 63, with almost complete pyloric obstruction, the pylorus was involved in a large mass the size of my closed fist, movable above, but below extended into the head of the pancreas. There were enlarged glands in the gastro-hepatic omentum and great omentum, and owing to the extent of the disease in the pancreas I decided to content myself with posterior gastro-enterostomy. This was done two and a half years ago, and the patient is still alive and in excellent health. From the result it looks like a case of non-malignant ulceration of the pylorus, although the pathologist who examined a gland that I removed at the time reported it to be malignant.

In cases of pyloric ulceration the relief it gives is absolute. By the rapid emptying of the stomach, it removes the source of irritation—the food escapes by the new opening, as the spasm of the pylorus that is supposed to exist in these cases is sufficient to prevent its passage over the ulcerated pylorus—and allows the ulceration to heal.

I saw an excellent example of this in a miner, aged 61. The ulcer was situated upon the posterior half of the pylorus, and a scar marked the position on the surface of the stomach. Although the lumen allowed the forefinger to pass, the disease produced considerable dilatation of the stomach from the resistance to the passing of the food.

For simple gastric ulcers which are intractable to medical treatment, where there have been recurring attacks, and the patients are rendered unable to follow their employment or enjoy life, and are in constant misery, gastro-enterostomy is justifiable, and the only treatment likely to cure them.

A most interesting case of gastro-ulceration with acute hemorrhage occurred in a patient aged 41. Her symptoms dated back fifteen years. For all these years she had suffered great pain after food, with the other accompanying symptoms, and had to be cautious to eat only the most easily digested articles of diet; and for the last two years only liquid food. In 1898 in the course of four days five attacks of acute and profuse hemorrhage occurred, which nearly proved fatal, and from these she was several months recovering; and ever since stabbing, pricking pains under the left breast and shoulder blade never left her. When she had sufficiently recovered, on more than one occasion I tried to prevail upon her to let me operate; but she would not hear of it. My object was to examine the stomach, break down adhesions and perform posterior gastro-enterostomy. However, on December 27th, 1900, she

had two more profuse hemorrhages that rendered her blanched and pulseless, and on the following day had three more smaller hemorrhages of a bright red color. This indicated that the bleeding was still going on. An ice-bag over the stomach and the usual treatment was pursued. The question to be decided was whether or not to cut down upon the bleeding-point. The patient and her friends were anxious for me to do so, knowing the serious condition it had reduced her to on the former occasions; and as the bleeding continued I thought it justifiable to operate. Another reason that helped me to arrive at this decision was the fact that only a few months previously I had witnessed the death of one of my patients from hemorrhage resulting from a gastric ulcer. The percentage of deaths from this cause is low; it is said to be only 5 per cent.

Before beginning the operation, she was transfused with three pints of saline solution and a 1-30 gr. of strychn. given. On opening the abdomen, the stomach was bound by adhesions to the under surface of the liver and anterior abdominal wall. The adhesions were carefully broken down in all directions; then the stomach was examined externally, but there was no thickening to be felt in any part of the organ.

A horizontal incision was made over the centre of the stomach; it contained about a pint of mucus and bright blood. After wiping this up with sponges on holders, a careful examination of the interior of the stomach was made. A clean sponge on a holder would return unstained from the cardiac end, but whenever it was passed towards the pylorus it was always bloodstained. A careful search was made in the suspected region, but I could not locate the bleeding-point. I was just about to close up my opening when I found the bleeding had increased. As I pulled down the lower edge of the incision I saw the blood flowing freely from two points in the opposite sides of a small, oblong ulcer, one-half inch by one-third inch. These two points were tied and the bleeding ceased. The ulceration was not deep, and did not extend through the mucous coat. About two inches from it there was another ulcer, but there had been no hemorrhage from it. The stomach was quickly sewn up and the operation completed by performing a posterior gastro-enterostomy. As the patient showed signs of failing, she was transfused with 60 oz. of saline solution. Respiration also became so very shallow and weak that before the operation was completed a temporary tracheotomy had to be done. The after-history of the case was slow, but uneventful. Her condition has gone on improving, and at the present time her sister tells me she can enjoy any ordinary food that is put before her.

Operative treatment in this case fortunately turned out suc-

cessfully, and the history of the former hemorrhages justified the extreme measures; but as a routine practice, I think it a doubtful procedure.

Mayo Robson in his Hunterian Lectures gives the mortality in operative treatment as 64 per cent. as compared with 5 to 10 per cent. in cases treated medically. Still, every case has to be treated on its own merits.

Gastro-enterostomy Combined with Gastro-Plication: In cases of dilatation of the stomach, where medical treatment has been carried out for months or even years, and only affords temporary relief, the patient gradually losing weight and strength, gastro-enterostomy should be resorted to. One of the most interesting and satisfactory cases of the series was one of gastrectasia—an enlargement of the stomach with motor insufficiency. (Dr. B. F. Curtis, *Annals of Surgery*, July, 1900).

G.G., a tall and delicate-looking young man, 21 years of age, consulted me in July, 1900. For six years he followed the occupation of waiter; family history good; had measles when a youth, and four years ago was in a coach accident and rendered unconscious for twelve hours after. He was also severely bruised all over the front of the abdomen. A year later he began to be troubled with a feeling of fulness and a pain of a drawing, cramping character after food. The cramps at first would only come on after going to bed, and be relieved when the flatus—which caused terrible rumbling and noise in the stomach—came up. At first, there were intervals of two or three weeks between the attacks. He had a great thirst, and used to drink large quantities of fluid, a quart or more of milk or buttermilk at a time, and would often throw it up whilst still cold. Six months after the first onset of his symptoms vomiting came on and kept up for months, usually about twice a day—which always relieved the discomfort. The vomit was of a thick, frothy, mucous character, but there was never any trace of blood. When the vomiting ceased, it was followed by troublesome pyrosis. Always on waking in the morning he would be “blown up like a poisoned pup,” as he put it, with gas, but after walking about it dispersed; losing weight and strength gradually and continuously. He told me: “I have taken medicines all the time, both for my digestion and for my bowels, which have been very constipated; washed out my stomach for the last eight months, sometimes daily or every other day. At first I felt relief from it, but very little latterly. I could pour a gallon of warm water into it. I was very fond of ham, and would sometimes try a very thin slice of it; if the stomach retained it, pieces could be seen in the washings 24 or 36 hours later.” For the last year he had been obliged to restrict himself to milk and soups, and these would often come

up six or eight hours after. A severe water-brash was constant. On examination, the body was poorly nourished, but the abdomen was prominent as if he were suffering from an abdominal tumor. The prominence was more evident on the left side and extending from above the umbilicus to the symphysis pubis; resembling the outline of the stomach. The percussion note over this area was of the same character and pitch and the loud succussion sound could be easily obtained—and, in fact, heard when he moved about. There was no pain on palpitation, nor could I feel any tumor. Inflation of the stomach with CO_2 rendered the outlines still more evident, and when the stomach tube was passed well down, the patient said he could feel the end of it just above the pubes. His stomach was washed out daily for a week, with very little relief, and then fed on peptonized foods. Operation was decided upon and the usual preparations gone through. An incision $3\frac{1}{2}$ inches long was made in the middle line above the umbilicus. On opening the peritoneal cavity, I lifted up each edge of the wound and could readily see the upper border of the stomach opposite the centre of my wound. The pylorus was first examined. Its position was somewhat lower than it should normally be, but it felt soft, healthy and free from thickness, and the stomach wall could be envaginated into it. The organ was then delivered through the incision on to the abdominal wall. It was immensely enlarged. Unfortunately, it never occurred to me to measure it whilst it was outside. The largest size esophageal bougie was laid over the centre of the stomach parallel with the greater curvature, and the walls sewn over it, as in Witzel's operation. About twenty interrupted silk sutures were inserted and tied, and then the bougie withdrawn. This procedure diminished the area of the anterior wall by at least one-third. It is impossible to apply the same method to the posterior surface, so that I completed the operation by performing a posterior gastro-enterostomy.

The resulting shock was not great and the patient made a good recovery. In three weeks he was allowed out of bed and was able to eat whitefish, chicken, baked potatoes, bread and toast, feeling quite comfortable after his meals. It is now a year since the operation; he has been working as a cook at a restaurant for the last eight months. In reply to enquiries, he writes that he feels quite well, can eat anything except salt corned beef and cabbage, and has gained thirty-five pounds, and says he can take as long a bicycle ride as any man.

Ewald gives as the etiology of dilatation of the stomach, two causes: 1st. Mechanical contraction of the pyloric opening; 2nd. Absolute or relative weakness of the expulsive power—that is to say, an atonic condition of the muscular wall. The

case evidently comes under the second cause, because there was no thickening of the pylorus or narrowing of its lumen. The history points to impaired muscular tone, probably brought on by the bruising of the abdomen, injuring the muscular fibres of the wall of the stomach at the time.

The indications for operation in this case were, the very dilated state of the stomach, the absence of any relief from lavage and strict diet, the patient rendered unfit for work, gradually losing his strength, and having to be supported by the other members of his family.

Whether the relief could be obtained by posterior gastro-enterostomy alone, I am not prepared to say, but I firmly believe that the gastro-plication assisted in the rapidity of the relief obtained, though I feel sure that the latter alone would not have brought about the same successful result. For gastro-plication there are a variety of operations—Bircher's, Wier's, Brandt's, Bennett's—but performed in the manner that I have described, it is easier of performance, rapid, effectual, and neat in appearance.

Mr. Bennett, in an article in the *British Medical Journal*, February 1900, speaks of gastro-plication as an unscientific operation, but one which it was stated had been performed with benefit in two cases on the continent. He also refers to it as a useless measure in a case that was not relieved and eventually terminated fatally. He says: "Had I opened the stomach and examined the pylorus, as I now should do, there is, I submit, no room for doubt that I would have detected the unnatural condition and a curative operation have been performed instead of the useless measure adopted."

I may here mention a case of gastro-plication only where I found the stomach dilated and prolapsed, the patient, suffering from the most troublesome hyperchlorhydria. I found no thickening of the pylorus and therefore contented myself with gastro-plication after Bennett's plan, and in addition uniting the stomach to the anterior abdominal wall by three silk sutures. As long as the patient remained in bed he felt comfortable, but soon after getting up and moving about his symptoms returned. Had I performed posterior gastro-enterostomy I do believe this patient would have been cured.

Gastro-enterostomy combined with Gastrolysis: This patient was operated on four and half years ago for double salpingitis with adhesions. For two and a half years afterwards she enjoyed good health, then symptoms of dyspepsia followed and grew worse. Pain of a dragging, contracting feeling in the pit of the stomach, relieved by lying down but immediately brought on should she stoop to lift anything from the ground. Never suffered from acidity, nor did she vomit as long as she

lived upon liquid food, but often experienced discomfort. Washing out the stomach relieved this. For eleven months she was under the care of several well-known specialists in the States, treated for a chloridia. She was temporarily improved by the treatment, but a few months after her return home she became as miserable as ever. An exploratory operation was decided upon. The stomach was found slightly dilated and pouched, this condition being produced by a few gastric adhesions, but principally by the adherent condition of the great omentum to the scar of the wound of the former operation. After separation of the adhesion, the stomach returned to its natural shape. The pylorus felt natural, and as the symptoms pointed to a condition of gastrectasia I concluded that it was also safer to perform a gastro-plication enterostomy. She stood the operation well, and her symptoms have completely disappeared. She is fast recovering her former health.

These are the cases for which I performed gastro-enterostomy with permanent and uniform relief in all, except the cases of pyloric cancer, which were only temporarily relieved. This result is encouraging, and this form of treatment is undoubtedly applicable to a large class of cases, the subjects of which go through life at present in the utmost misery.

Gastrolisis, freeing the stomach from adhesions, has been performed in several of the previous cases, as numerous conditions both inside and outside of the stomach give rise to them.

Perforating Gastric Ulcer.—The only case that has occurred in my practice was a case of hour-glass contraction of the stomach in a lady 39 years of age. The history briefly was as follows:

Symptoms of gastric ulcer began twenty years ago; at one time the pain resembled that of spinal caries, and was diagnosed as such; her medical attendant had the courage of his convictions and put her up in plaster jackets and spinal supports for two years. On a Sunday evening she ate a dinner of roast lamb and vegetables, and at midnight was seized with severe tearing pain in the epigastrium. She could not keep still, but screamed and rolled about the bed. A hypodermic injection of morphia to ease the pain, and a dose of castor oil were given. The pain was lulled, but never entirely ceased. A morphia tablet was given on the following day. On Tuesday she went to the hospital, and walked from the door to the elevator, a distance of fifty yards. I was asked to see the patient thirty-six hours after the first onset of pain, and from the symptoms it was evident that we had to deal with a case of acute peritonitis. The differential diagnosis was between general

peritonitis from a perforated appendix and a perforated gastric ulcer. The patient was in no condition to go into her previous history, but she was able to tell us that the severe pain started in the epigastrium, after which she attempted to vomit, but did not succeed in bringing up anything. On palpation, the most painful area was over the right iliac region.

An incision was made according to McBurney's method over the appendix—the point of greatest tenderness—but the appendix was found to be normal. The peritoneal cavity was found full of a greenish, opaque fluid, which I washed out with several gallons of hot water. Another incision was then made in the middle line above the umbilicus. The stomach and omentum were matted to the anterior abdominal wall. After loosening the stomach, the hour-glass condition was evident, and above the middle of the lesser curvature there was a round hole through the gastro-hepatic omentum which would admit the tip of the little finger. This opening, I found, led into the lesser omentum cavity, and from it some milky fluid escaped.

By lifting the omentum and colon up, and tearing through the meso-colon, the posterior surface could be examined, and a valve-like perforation in the constricted portion of the stomach was found. Squeezing upon the cardiac portion of the stomach, its contents could be seen escaping through it. Seven or eight sutures were inserted across its long axis, performing a gastro-plasty. The abdomen was thoroughly washed out, drains were inserted—one above the stomach under the liver, and another into the lesser omental cavity below the stomach, and from a lower incision another drain into the pelvis. These drains were removed within forty-eight hours, and, but for the plebitis in one leg, her recovery was uneventful. It is now three years since the operation was performed, and she has been steadily improving in health ever since, being able to ride a bicycle or walk five or six miles without being fatigued.

The difficulty in this case was to make out the exact condition of the parts. This has led to several fatal mistakes. Within the last year three cases have been reported in the *British Medical Journal* where cardiac division of the stomach was not found until at the *post-mortem*, and an operation completed by dealing with the distant or pyloric portion of the stomach.

In the first place, one should bear in mind that such a condition does exist, and in the second place, one must not be satisfied until the outline of the stomach is clearly defined.

In my own case, after examining the pyloric end, and in proceeding towards the cardiac end, I found it terminating in a narrow neck, which I knew could not be the esophagus, reaching down to the middle line, and therefore it was quite evident what I had to deal with.

The cause of the constriction was cicatrization of an old ulcer. The constriction in the majority of cases is found, as in this case, near the middle of the stomach. For an able and exhaustive account of the surgical treatment of the hour-glass contraction of the stomach, I refer you to a paper by Dr. Watson, of Boston, read before the American Surgical Association, in May, 1900. This condition of the stomach presents itself in two forms—congenial and acquired. In several recorded cases of the former, the patients were free from any gastric symptoms, but there is no example on the other hand, in the acquired cases that gastric symptoms were not also present. This condition of the stomach has been frequently correctly diagnosed and operated upon. Distending the stomach with CO_2 , or with water, the water is heard rushing through the contracted portion; and again, by introducing bismuth in solution, and taking an X-ray photograph of the stomach. The operations that may be resorted to for the relief of this condition of the stomach are, gastric-plasty, gastro-gastrostomy, gastro-enterostomy.

Perforating Duodenal Ulcer: This case I saw twenty-four hours after the perforation occurred. The history resembled that of perforation of the stomach. The peritoneal cavity was full of purulent fluid. The seat of the perforation was found by the sudden liberation of a collection of dirty fluid, intermixed with particles of food from the right hypochondriac region. The opening which was close to the pylorus was closed with a few Lambert sutures. The toilet of the peritoneum was attended to in the same manner as in the preceding case. The patient lived only fourteen hours after the operation.

Early operation in these cases gives the only chance of recovery. There were only a few cases of recovery from perforating duodenal ulcer until recently. Now that the diagnosis is thoroughly understood, and the signs of perforation are more readily recognized and operation resorted to without delay, the records are fast improving. In all cases it is best to simply suture the ulcer and not try and excise it.

In the early days of abdominal surgery the surgeon occasionally closed his abdomen with draining the peritoneal cavity, having failed to find the perforated organ. But I venture to say that the average surgeon who practises this branch of his profession these days seldom fails. The common sights of perforation and causes which give rise to peritonitis are so familiar to them that they run over all the likely starting points without loss of time and soon arrive at the seat of the trouble. Some able and well-known surgeons of the day tell you that if you open the peritoneal cavity for any operation, such as ventral fixation, appendicitis or any other intra-abdominal opera-

tion, that you should pass your hand over and examine all the other organs. This, I consider, is too heroic and sweeping—unless you are doubtful as to the diagnosis.

Mr. President and gentlemen, I have touched only in a very fragmentary manner upon certain points in this very interesting field of surgery—which, with improved means for the correct diagnosis of the conditions of the interior of the stomach—will enable us to relieve many more unfortunate sufferers.

THE MEDICAL TREATMENT IN SURGICAL TUBERCULOSIS.

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I suppose everyone has in mind the division of tuberculous disease into medical and surgical cases. This classification, since it is based upon the requirements of treatment, is not fixed but quite the reverse. The case which to-day might be called medical becomes surgical to-morrow. Although tuberculous disease may be divided in this way, it must not be forgotten that this classification is entirely for our own convenience; that there is no change or difference in the nature of the disease. It is of the first importance to remember this fact, as we shall presently, I hope, see when we enter into consideration of the subject of treatment.

Making a division according to the requirements of treatment is only possible in a restricted or partial sense. Transference from one class to the other, from medical to surgical, does not involve an alternative, but simply something additional in the therapeutic requirements. Medical tuberculosis does not cease to be medical because some surgical or mechanical treatment is required. All this is so apparent and obvious that it seems scarcely necessary to state it, yet I make bold to say that, in the vast majority of instances, this identity is lost sight of, and it is the alternative treatment rather than the additional that is given.

On all sides one hears that tuberculosis is a curable disease. Thanks to a better understanding of the disease, its nature, environment, soil required in order that it may flourish, it is now happily not uncommon to obtain complete cure as a result of purely medical treatment. True, no absolutely specific medicine has up to the present been discovered, yet with the means at hand, and a clear understanding of what is being attempted or sought after, wonderfully good results may be obtained. Needless to say, the clearer the view as to the requirements and the more thorough and persistent the treatment, the better the results.

Medical treatment is applicable to all cases, and should be instituted in all cases. That this rule is followed, both observation and reading lead me to seriously doubt. If one takes the trouble to investigate and determine this point, it will be found that tuberculous cases requiring surgical treatment in the great majority of instances, receive little or no medical treatment. The identity of the tuberculous process in all cases

is lost sight of, or if recognized it is somewhat in the abstract and does not find practical application. As I have mentioned above, what should constitute an additional feature in treatment becomes the alternative taking up the entire field. To attest the truth of this statement, it is only necessary to recall a series of cases seen in private practice or in hospital wards. Hip-joint disease, carious spines, white swellings, tuberculous articular disease in various situations, etc., receiving the benefit of every device and procedure in the mechanical and surgical way, splints, dressing, drainage, lotions, etc., occupying the entire therapeutic field to the exclusion, in many instances total exclusion, of medical treatment. True, many surgical cases may receive at times cod liver oil or it may be a tonic, but the point I wish to make is that surgeons are quite content as a rule with purely mechanical treatment, and fail to take advantage of the immense possibilities for cure offered by treatment other than mechanical. In combating tuberculous disease, no matter where located, every resource to be obtained is too often, unfortunately, too little. If medical treatment is of advantage in controlling and curing tuberculous disease situated in the apex of the lung, and surely no one will deny that it is so, then by the same process of reasoning it must be of like advantage in conjunction with the additional surgical means in tuberculous disease situated in the head of the femur. In so far as the therapeutic requirements of the two cases are concerned, they are absolutely parallel. The requirements in the case of the tuberculous femur, however, extend farther—to include the additional surgical treatment.

Let us pass in review the several features which might be included by the term medical treatment and see how perfectly each feature applies to surgical as well as to medical tuberculosis. Let us, however, first note the problem set before us: A human being infected in some part of his body by the fungus of tubercle. The tubercle bacilli may be located in the apex of the lung, or it may be in the head of the femur. How can he be so dealt with that the tissues of the body may not only resist, but finally overcome and destroy the invading poisonous germs? Work on the problem has been directed mainly towards two distinct objects: 1. To strengthen the resisting and aggressive power of the tissues of the body; 2nd. To weaken the power of the hostile germs.

The means employed towards the furthering of the first object one readily recalls, climatic and hygienic treatment is included under this heading. The patient should have the fullest advantage of sunshine and fresh air. Because a free supply of oxygen and exposure to the sunlight quickens and stimulates nutrition in all parts of the body. One must remember that it

is only in a sense that the disease can be said to be local. In reality all parts of the body suffer. The tissues fighting the poison of the disease must be given every assistance to not only secure a free supply of fresh air and sunshine, but also to get rid of impurities which would tend to weaken them. The care of the body, from the standpoint of hygiene, must be attended to in many ways. Digestive and alimentary functions, for example, exercise, bathing, massage, mental surroundings, rest, food and sleep, all directed towards the common end of strengthening to the utmost the cells of the body, and of improving their resisting qualities against the poisonous bacilli that have fastened upon it at some part. Will any one say that the tissues of the body do not as much require this strengthening and upholding process in surgical as in medical cases?

A second means towards the same end is found in the administration of medicines which are known to improve nutrition. The drugs that have gained the greatest repute in this respect are iron, arsenic and strychnine. There is no doubt that the nutrition of the body in all parts is improved by these medicines. No one says that they are at all specific in the disease. They are given with the idea of increasing the resisting power of the body through improvement in nutrition. They must, however, be given continuously and for long periods. The indications for their employment never cease until cure is brought about or defeat acknowledged. I almost invariably administer them in capsule form and in full doses. Iron is not so necessary in older subjects. There are, of course, many forms in which one may administer these three substances. In the case of young subjects, syrup of the iodide of iron with *nux vomica* and liq. *arsenicalis* is a very useful prescription. The important points respecting the administration of medicines of this class are that they should be given for long periods, and that they should be used in as full doses as can be well borne. In a long contest such as we have on hand, persistence in treatment is of the utmost importance.

Cod liver oil is by many believed to improve nutrition. Of late it has lost to a certain degree its former prestige. It is looked upon more as a nutritious food than as a medicine. If well taken it no doubt is of advantage. If, however, it disgusts or is not tolerated well, my own impression is that what little good it can accomplish in the way of improving nutrition, will be more than counterbalanced by the interference with digestion.

It seems clear that there is as great need for upholding nutrition in surgical cases as in medical. A visit to a surgical ward would not lead one to that belief. Exception must be made, however, in the case of cod liver oil, which for some reason is in favor with surgeons.

Prof. Treves, in his work on surgery, has a low opinion of the usefulness of medicine. Iron he would give "if there is anemia," "arsenic and quinine," he thinks, "are now and then of value." "Three-fourths of the medicines given are administered, not to treat the disease but to soothe that inherited craving in the human race for physic."

Cheyne and Burghard give first place to cod-liver oil, and advise 2m.-3m. of creasote. Let us not forget the indication—to improve nutrition and thus to increase the resistance and aggressive action of the tissues, which is the first part of the problem set before us. Who is to say that the medicine given to soothe pain or to procure sleep is not playing a part towards this in common, though less directly, with iron, arsenic and strychnine, cod-liver oil, etc.?

Edmund Owens, in his address on Tuberculous Lesions, from a Clinical Point of View, at the Canadian Medical Association of last year, in considering treatment expressed his belief in the value of cod-liver oil *by inunction or in sardines*! Evidently this was the only medicine which seemed to him useful.

This very day, in a hospital ward, I saw four cases of tuberculous diseases, all the cases in the ward under four different surgeons, not one of whom was receiving medical treatment of any kind. Surely resistance would be increased by judicious treatment towards improving nutrition, and the chance of destruction of the infection germs increased thereby.

Let us turn now to the second part of the problem presented. To weaken the power of the tuberculous germs. We can most readily conceive this being done by in some way altering their environment so as to make it unfavorable to further growth and vigorous development. In other words, we strive to bring about some alteration in the culture medium. Attempts have been made to secure this change by many substances. In one instance a very great measure of success was obtained. Several years ago, Coghill, of London, Eng., published in the *British Medical Journal* a report of experiments with creasote administered with the object of affecting this change. Dr. Coghill found that by injecting so much creasote into guinea-pigs he could bring about saturation of the body to a sufficient degree to render the animal immune to tubercular infection, and also to inhibit greatly the growth of tubercle if the animal had been previously infected. In these experiments control animals were used, to prove the correctness of the conclusions. These animals were readily infected by the same inoculation.

Such is the experimental basis for the use of creasote. The idea is to saturate the body to a sufficient degree to render it inhospitable to further growth of the tubercle bacilli. To effect a change in the culture medium, I believe Coghill's conclusions

were correct. My own experience leads me to consider creasote the most useful by far of all therapeutic agents at our command. It must, however, be given in large doses; sufficient alteration is not likely to be obtained by giving two or three minims three times a day. From his experiments, Dr. Coghill estimated that twenty or thirty minims three times a day would bring about the degree of saturation in the average-sized man that he had found necessary in the guinea-pig.

Unfortunately creasote is an irritant substance, and as frequently administered it leads to so much disturbance of the stomach that its use is abandoned. This is most unfortunate, for it may be given in large doses with but very slight, if any, irritation. My own plan for several years has been to order creasote in bulk, say one ounce, and at the same time to order a quantity of bismuth subnitrate. Empty capsules with dropper, complete the outfit.

The patient or nurse is directed to first loosely fill the capsule with bismuth and then to drop in slowly as much of the creasote as will be absorbed by the bismuth. If one capsule is not sufficient, two, or as many as seem necessary may be used to contain the dose. Any irritation can be met by increasing the amount of bismuth.

The patient is directed to take the creasote three-quarters of an hour after meals, and usually to begin with a small dose, say five minims, and to increase the dose one minim every other day until taking 20, 30 or it may be 40 drops three times a day.

For a number of years I have given creasote in this way and have never had to discontinue its use. I have patients at the present time who have been taking the medicine in from 20 to 30 drop doses three times a day for more than a year.

No harm seems attached to these full doses of creasote. I have many times examined the urine in order to determine if there had been irritation of the kidneys.

Following this idea of saturation by creasote, to change the environment in conjunction with measures such as I have described, has given exceedingly good results, and in some cases remarkable results.

I repeat again, is there any reason why the man with tubercular disease of the knee should be debarred from receiving the benefit of creasote in common with—I would not be understood as in any way underrating them—surgical means of cure. Surgical means are directed towards the same end, either to improve nutrition, by rest, fixation, freedom from irritation, and the consequent increase of resisting power in the tissues, or else towards the change of environment by the use locally of antiseptics, etc., etc.

Surely no one will deny that the utilization of all the means

at our disposal, hygienic, climatic, nutritional, medicinal and mechanical, must give better results than if only one part. A case will illustrate what I consider fully adequate treatment according to our present light.

Treatment.—J—A—, aged 39, consulted me in the spring of last year at the General Hospital, on account of great pain and tenderness about the elbow. He had been well and healthy until about three months before coming to the hospital. Then he began to experience pain and great tenderness in the left arm about the elbow. He lost flesh and failed rapidly. His father and mother were living, but three sisters had recently died of consumption. The last one shortly before.

On examination of the arm, it was found to be exquisitely tender over the head of the radius; movement was extremely painful, particularly rotation, jarring also caused pain. No external redness and no enlargement of the arm. Temperature was elevated at night.

I diagnosed tubercular disease of the head of the radius. Dr. Peters, who was my surgical colleague, saw him with me and concurred in the diagnosis.

Treatment.—1. Fixation of the joint in a rectangular splint, which extended to the fingers to prevent flexion and rotation. Later a leather splint was worn.

2. He was sent back to the farm, with instructions to keep out of doors as much as possible, and as busy as his crippled condition would permit; to sleep with windows wide open; take nutritious food and to keep his digestive functions in order.

3. Capsule.—Ferrum redact. grs. iii., three times a day.

Strychnine grs. $\frac{1}{20}$.

Acid arsenic grs. $\frac{1}{20}$.

Quin. sulph. gr. i.

4. Creasote in capsule with bismuth subnit. gradually increased to 30m. three times a day.

He quickly was relieved from pain, and reported improvement and increase in weight.

During exhibition week, in September, he came to see me, wearing the splint and still pursuing treatment. He had increased 15 lbs. in weight and wanted to abandon the splint, as the pain and tenderness had gone. I asked him to continue treatment for some time, and if not well to let me know. I have not heard from him since. I do not for a moment believe he would have done so well if but part of the treatment had been given. The employment of all the means at our disposal assuredly gives the greatest measure of success.

Selected Article.

DISCUSSION ON THE TREATMENT OF INTUSSUSCEPTION IN CHILDREN.

I.—BERNARD PITTS, M.A., M.C., F.R.C.S.,

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In June, 1897, I contributed a paper to the *Lancet*, in which the following suggestions were made :

1. In cases of recent acute intussusception, distension of the bowel by air or water, combined with gentle external manipulation, may be tried under an anesthetic. The surgeon should, however, be present, and prepared to at once open the abdomen if a satisfactory result is not quickly obtained. In many cases the effect of such inflation is to reduce the main portion of the tumor, but to leave an irreducible portion in the right iliac and lumbar regions. This amount of success aids the subsequent operation, and allows the tumor to be easily delivered through a smaller incision and with less manipulation. Supposing that inflation has apparently been successful, the child should be carefully watched, and, with evidence of continued trouble, abdominal section should be resorted to and no further inflation tried.

2. An exploratory operation should be undertaken without preliminary inflation when, from the severity of the symptoms or the chronicity of the case, there is reason to believe that such inflation would be dangerous or unlikely to succeed. It must always be remembered that the time taken up by inflation adds considerably to the shock.

3. The median incision is most suitable in the majority of cases, but when the tumor is in the cecal region a limited incision in the right semilunar line may be found most convenient. For the reduction of the final portion of an intussusception the tumor should be brought outside the wound, so that the operator may clearly see the condition of the bowel and make sure that the reduction is complete. Thickening about the ileo-cecal valve may be mistaken for an incomplete reduction. When in doubt, an incision may safely be made into the colon and the parts examined from within the bowel.

4. When reduction is found impossible, a resection inside the colon would seem to afford the best chance. The junction between the large and small bowel must be made secure before any part is cut away. When gangrene is present the condition

in young children is almost hopeless. Complete resection and end-to-end union, whether by Murphy's button or suture, so far has met with little success. Perhaps rapid resection with lateral implantation of the small bowel into a healthy portion of the colon, and bringing the cut end of the large bowel to the surface as a temporary vent for the escape of flatus, would be the quickest and safest method to adopt. Safely, however, as children stand a short operation, a prolonged one under such circumstances seems almost beyond their power.

Such, then, were my views in 1897. In the light of further experience, and from a study of 115 cases of intussusception treated at St. Thomas's Hospital, I have considered whether any modifications of these deductions should be made; but I venture to put my present views before you in the hope that they elicit the opinions of those interested in this subject who are present, and in this way help to settle the main question—namely, whether any treatment except immediate operation should be employed.

In the table before you of 115 cases treated for intussusception at St. Thomas's Hospital, we have 105 in children under 12 years of age, with 36 recoveries; 13 recovered after treatment by inflation and manipulation, and 23 after abdominal section.

The average age of the cases cured by inflation was 22 months; 5 of these cases were 6 months or under. The average age cured by abdominal section was 19 months, no fewer than 13 being 6 months of age or under.

During 1898, 1899 and 1900 the uniform practice at St. Thomas's has been primary abdominal section, with 27 deaths and 21 recoveries. The only exception was a child aged 7 months, who was treated and cured by water pressure, the symptoms having existed for twenty-four hours.

In looking at the table, one is struck by the great increase in the number of cases brought to hospital during the last few years. Between 1875 and 1894 inclusive, 40 cases; between 1895 and 1900 inclusive, 68 cases.

We can hardly suppose that intussusception is now more common, but must take it that medical men diagnose the condition more frequently, and recognize the fact that the cases have a fair chance of recovery if sent without delay to hospital.

Since 1897, at St. Thomas's Hospital, out of 49 cases, inflation was only tried on one occasion, water was injected and relieved all symptoms, the child was 7 months old, and had been ill twenty-four hours. We have found that immediate operation gives the best result in hospital cases. As a rule, they have been treated either rightly by enemata or wrongly by purg-

atives before admission. Formerly the physicians gave a thorough trial to air or water pressure, and sent for the surgeon when they considered their efforts had failed. At the present time the surgeon is called at once, and an inflation is never attempted unless the surgeon is prepared to open the abdomen. The most unsatisfactory feature in attempts at inflation is that you are never sure that you have succeeded in reducing the whole of the intussusception, and in the ileo-colic and enteric forms it is most improbable that success will attend your efforts. It is not so very uncommon to have an intussusception of small bowel into small intestine near the cecum, and then a further intussusception into the cecum.

Again, in operating on intussusception one cannot but be struck by the considerable difficulty experienced in the majority of cases in affecting a complete reduction even when the part is manipulated outside the abdomen. It often requires very careful inspection to make sure whether the residual thickening left is due to edema or to a still unreduced final portion of the intussusception or to some complication, such as polypus, inverted Meckel's diverticulum, or even inversion of the appendix.

It is, then, this uncertainty as to the exact condition of the bowel which makes the surgeon prefer to handle and see the bowel. The length of time which has elapsed since the first onset of symptoms cannot altogether be relied upon as a guide; such swelling may take place in a few hours, so as to induce gangrene, or make the reduction by abdominal section and taxis extremely difficult; whilst intussusceptions which have lasted for days, or even two or three weeks, are occasionally reduced with comparative ease, and with very little change visible in the bowel after its reduction. What happens in intussusception is very much the same in this respect as in strangulated hernia, except that in the intussusception of children, swollen mesenteric glands are constantly met with, and often form one of the difficulties in the final reduction. I would, then, reserve trial by inflation to cases seen within a few hours of the commencement of symptoms, and then only when the symptoms are not of a very acute form.

It follows that most cases seen in hospital are best dealt with at once by operation. In some of these, however, when the intussusception has travelled along transverse or descending colon, inflation may be employed as a useful preliminary to exploration, and will often limit the field of operation and enable the incision to be made directly over the swelling.

Even if complete reduction should apparently take place, it will generally be best to make sure by a small incision, other-

wise there must remain a considerable doubt, and it is highly probable that reduction is not quite complete and will recur, or else give rise later to a condition of chronic stenosis.

I believe that water pressure is more easily managed than air, and is more efficient, and is also unattended with danger when introduced slowly and by a glass funnel, which should not be raised more than two feet above the patient.

In performing laparotomy on a young child, it is essential that the shock should be minimized by placing the child on a hot-water cushion, and by having the extremities covered with cotton wool and bandaged. The operation must be a rapid one. When the abdomen is much distended, and the position of tumor is not manifest, it is best to make an incision in the middle line and to take special precautions against the prolapse of small bowel. A distended coil may with advantage be withdrawn and air and intestinal contents allowed to escape through a small incision, and this incision having been closed, the after-examination is rendered comparatively easy. This is a much safer course to adopt than to allow coils of distended and unmanageable gut to remain outside the abdomen during the exploration.

In effecting the reduction of an intussusception the most common accident is the splitting of the peritoneal coat of the ensheathing layer. The greatest gentleness is necessary, and most of the work should be done by pressing on the apex of the intussusception rather than by dragging on the entering bowel. If great difficulty is experienced it may be advisable to open the ensheathing layer, and assist by the insertion of the finger within the bowel. The nature of the difficulty can be thus ascertained, and some of the edema will be relieved.

If the reduction is still impossible, the irreducible part in a favorable case may be resected *in situ*. Such a procedure is rarely feasible in an acute case, and is more likely to be required in a chronic intussusception.

When gangrene is manifest, resection and immediate end-to-end approximation is most unlikely to be successful in a young child, and the treatment I would suggest is that of resection, putting Paul's tubes into the end of the bowel after bringing the ends outside the abdominal incision—or better, through a separate smaller incision conveniently placed so that there shall be no drag on the bowel. Two or three stitches should then secure the bowel end beyond the tubes to the parietal peritoneum, gauze being wrapped round and between the tubes, and the patient got to bed as quickly as possible. Continuity should be established at a subsequent operation. If, however, the intussusception is of the enteric form, high up in the intestine, then restoration of continuity must be established at once, or the patient will die of exhaustion.

Before leaving the subject of acute intussusception, I would refer to a point of some importance, namely, the necessity for great care in the suturing of the exploration wound, and for the use of buried sutures, and for leaving the superficial sutures as long as possible. I have heard of several cases where an otherwise successful case has been endangered, or even lost, by the bursting open of the half-healed wound and the escape of intestines into the dressings. No doubt deep-buried sutures add a little to the length of an operation, but they are specially necessary in young children.

I have noticed after abdominal section in young infants, especially when there has been much manipulation of intestines, that death is often preceded by high temperature and delirium, and takes place within twenty-four hours of operation. Nothing is found *post-mortem* to explain the temperature or death. I have no experience of such a condition following similar operation in adults, and cannot explain it.

In conclusion, I venture to make the following modifications of the conclusions I arrived at in my paper of 1897:

1. Try inflation only when the case is seen within a few hours of onset, and is not of a very acute character. In the great majority of hospital cases it is better to open the abdomen at once.

2. Inflation may be tried in certain other cases for the purpose of reducing the main portion of the intussusception, and enabling the incision to be made directly over the cecum.

3. When reduction is found impossible in chronic cases, a resection may be generally done through an incision in the ensheathing bowel.

4. In acute cases, and especially if gangrene is present, or the condition of the bowel requires its removal, a wide resection should be undertaken as rapidly as possible, and the ends brought outside the abdomen; continuity should be restored at a subsequent operation.

5. In exceptional cases of enteric intussusception, resection and immediate restoration of continuity gives the only chance.

II.—D'ARCY POWER, F.R.C.S. ENG.,

Senior Surgeon to the Victoria Hospital for Children, Chelsea; Assistant Surgeon to, and Teacher of Surgery at, St. Bartholomew's Hospital.

In regard to treatment, although he was formerly an advocate for irrigation of the bowel, greater experience had taught him that this method was not to be relied upon, and he quoted cases which had led him to alter his opinion. He now performed an abdominal section at the earliest possible opportunity, reducing the intussusception if possible without bringing the tumor into the wound, though he had no hesitation in

making a very large incision and bringing the intussusception outside the abdominal cavity if there was the least difficulty in reduction. In this way he had had three successful cases in the course of the last three months, two of these being colo-colic invaginations, and the third a large ileo cecal intussusception, which was under his care at the present time.

III.—WILLIAM McADAM ECCLES, M.S., F.R.C.S.,

Senior Assistant Surgeon, West London Hospital.

Mr. McAdam Eccles said that given early diagnosis—and this, it must be allowed, was often left until too late owing to a failure to recognize the presence of cardinal signs or symptoms of the affection, namely, paroxysmal abdominal pain, vomiting, abdominal facies, the passage of blood-stained mucus, and the presence of a tumor to be felt through the abdominal walls, or *per rectum*—given, therefore, an early diagnosis, what was the best line of treatment? He thought that, provided the surroundings of the patient were satisfactory, the results of the present day showed that immediate laparotomy with a view to the reduction of the intussuscepted bowel was clearly indicated. The laparotomy was more likely to be followed by a happy result at this early stage in the affection because the child was less exhausted, there was less distension, and therefore less difficulty in dealing with the small intestines, and there was less likelihood of sepsis after the operation from the surface of the reduced gut. He considered that some of the cases in which the temperature of the young patient had risen very high, with a fatal result, had been those in which there had been septic absorption from the intestine that had been invaginated and reduced. Chloroform anesthesia was always needful. Rapidity of operating was of the utmost consequence in such cases. There was no reason, provided that everything was in readiness before the incision was made, that the operation, including the suturing of the abdominal wall and the application of a collodion dressing, should occupy a longer time than a quarter of an hour. There was one point that had hardly had the attention paid to it that it deserved, namely, the question as to whether a child that was being suckled by its mother should be put to the breast within a short time after the operation. He thought this unwise, and that it was better to withdraw the breast milk, and to give it to the child in teaspoonfuls very frequently repeated; for the act of sucking tended to so markedly stimulate the movements of peristalsis that there would seem to be a possibility of reproducing the intussusception. For the same reason he thought that it was always well to give small doses of tincture of opium, so as to obtain and maintain rest of the gut. He had seen good results

from the early injection of two ounces of hot milk into the rectum in those cases in which the collapse after the operation was severe.

IV.—A. H. TUBBY, M.S., F.R.C.S.

Surgeon to the Evelina Hospital for Sick Children, the Westminster, and National Orthopedic Hospitals.

Mr. Tubby spoke of the relative merits of inflation or irrigation and abdominal section. He was of opinion that in all but possibly the earliest cases, that is, those of a very few hours' duration, the patient stood a much better chance if abdominal section was performed at once. With reference to the rapid rise of temperature which occurred in some fatal cases before death, he had seen in the severe cases he had mentioned commencing thrombosis of the mesenteric veins corresponding to the apex of the intussusception, and he thought that this septic thrombosis was indicative of an acute septic infection originating in the damaged condition of the bowel. The rapid spread of the venous thrombosis was, it seemed to him, a feasible explanation of the continued pyrexia in cases of this type which were admittedly fatal.

V.—F. C. ABBOTT, M.S., F.R.C.S.,

Assistant Surgeon, St. Thomas's Hospital.

Mr. Abbott raised the point of fallacy in diagnosis, quoting a case of tuberculous peritonitis in which the sausage tumor was imitated by the rolled omentum, and there was passage of blood and mucus, this being due to a kink in the small intestine against a tuberculous gland that had suppurated. It was a question what should be done in cases in which there was local peritonitis, with gangrenous gut and a big abscess, and he advised merely opening the abscess, as in an acute abscess of the appendix, dealing with the intussusception later. The gangrenous gut should be resected and joined in two stages.

VI.—J. PAUL BUSH, C.M.G., M.R.C.S., BRISTOL,

Surgeon to the Bristol Royal Infirmary.

Mr. Bush was glad to hear strong remarks made concerning the importance of early abdominal section in these cases. He thought the time was not far distant when inflation and such like methods of reducing the intestine would not be tried, and so much valuable time in that way lost.

VII.—SINCLAIR WHITE, M.D., M.Ch., F.R.C.S.,

Honorary Surgeon, Sheffield Royal Hospital.

Dr. Sinclair White stated that while he agreed generally with the remarks of the previous speakers as to the advisability of immediate operation in intussusception, he thought irrigation should not be entirely discarded. With regard to the

hyperpyrexia following operation, he thought it due possibly to some trophic change or disturbance of the thermogenic centres. It came on too quickly to be due to sepsis. It was to be remembered that country practitioners were not all experts, and the public ought not to be led to think that operation offered the only remedy. He thought that if morphine were given at once so as to arrest peristalsis, there would not so often be a recurrence of the tumor. As regarded operation he thought it was very often better to bring the intestines out of the wound, keeping them warm and clean, so that the whole abdomen might be inspected and no other condition be passed over. He thought the formation of an artificial anus a bad measure. The mortality was very high in these cases, and the operation for closure of the artificial anus had also a very formidable mortality.

XII.—A. McPHERAN, M.D., TORONTO.

Professor McPhedran regretted not having heard Mr. Pitts's paper, but he wished to add his testimony to the importance of the early diagnosis of intussusception, so that prompt and effective treatment might be instituted. Early diagnosis was, however, frequently most difficult, as the symptoms might be very indefinite. As soon as intussusception was diagnosed, the case should at once be submitted to operation. This was the only course that offered a fair hope of success. In a recent case the great mass of intussuscepted bowel was easily reduced by inflation, but a small nodule might remain, and this on operation might be found exceedingly difficult to reduce. He had seen a similar case in which the symptoms had been very slight, and the peritoneum had looked well, in which death occurred from peritoneal sepsis the day following the operation. The condition had in this case only lasted twenty-four hours.

XIII.—A. D. BLACKADER, M.D., MONTREAL.

Dr. Blackader advised that purgative medicines should be avoided and enemata only used where any symptoms of obstruction were present. In his own practice he always emphasized the importance of early operation. He had not had the pleasure of hearing the early part of this discussion, but his own view was that there should be neither hesitation nor procrastination in procuring surgical assistance.

XV.—FREDERIC EVE, F.R.C.S.,

Surgeon to the London Hospital; Consulting Surgeon to the Evelina Hospital;
President of the Section.

The President remarked that the unanimous opinion of the various speakers was against the employment of inflation or injection, with the exception of the opener of the discussion,

who would employ these measures in cases seen within a few hours of the onset. For his own part, he summed up the arguments against them as follows: (1) Injection or inflation was very rarely efficacious. Of twenty-four cases so treated at the London Hospital not one was cured by this method alone. Eighteen were subsequently operated upon, and six died without operation. Of the eighteen cases subjected to operation, in fourteen reduction was effected, although inflation and injection had failed in procuring it. (2) Injection or inflation was not infrequently followed by an illusory or partial reduction. So-called recurrence of the displacement was inevitable, and the consequent delay in performing the operation usually led to a fatal result. He pointed out this danger in 1895, and had since insisted on immediate operation. Of six cases of his own treated by injection, incomplete reduction followed by recurrence occurred twice, and both patients died after operation. In the remaining four cases injection had no practical effect. In one of these cases he injected water one hour after onset of symptoms, and yet the reduction was only partial. Immediate operation resulted in recovery. (3) Injection or inflation were haphazard and therefore unscientific. They could not be expected to influence an intussusception commencing in the small intestine.

REPLY.

Mr. Bernard Pitts said, in reply: As regarded the high temperatures which occurred after operation, they came on too quickly to be explained by Mr. McAdam Eccles's theory of a toxic origin. They might more probably be attributed, he thought, to some impending death changes, and he had seen them occur after some other conditions involving operation—in one case after operation on the stomach. He wished to remind his colleagues that though a tumor might apparently be reduced after irrigation, it might only have shifted its position into the splenic or hepatic flexure, where it could not be felt. In these cases inflation might assist diagnosis sometimes. Dr. Sinclair White had objected to the general lines of treatment laid down, and seemed to think treatment by injection ought not to be disregarded. He agreed with him to a very limited extent. In general practice it might do good if the case were seen early, but it must never be substituted for operation.—(Synopsis of discussion at last meeting of the British Medical Association.)—*British Medical Journal*.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, J. FERGUSON, T. M. McMAHON, H. J. HAMILTON,
AND INGERSOLL OLMSTED.

An Important Case of Ambulatory Typhoid Fever.—Hemostatic Value of the Sulphate of Soda Given in Small Doses.—Result of the Serum Reaction of Widal.

The study of the present case is interesting, as it confirms once more the benefit of the classification of the various forms of typhoid fever; as it reveals the importance which the serum-reaction of Widal assumes in special conditions; and thirdly, as it has given an opportunity of testing the effect of sulphate of soda for the intestinal hemorrhages which so often complicate the typhoid infection.

The patient was a man, thirty-eight years old, a shoemaker, born in Naples. The father died of cerebral hemorrhage, the mother of pulmonary inflammation. He had been a soldier, and had contracted a gonorrhea and a soft chancre, after which he had no cutaneous symptoms. The present sickness began on January 15 of this year. The patient continued at his work in spite of a feeling of general malaise, fatigue and pains in the head. He had diarrhea, and noticed that his abdomen was somewhat swollen. On the 5th of February the patient was forced to go to bed, owing to fever and severe abdominal pains. While a physician was being sent for, he had abundant diarrhea with a large loss of blood, and vomiting also mixed with blood. It is important to fix the time of this hemorrhage, which took place between the third and fourth week from the beginning of the infection—a period, when, according to the accurate statistics of Homolle, hemorrhage is most frequent. The vomit containing blood was probably caused by the regurgitation into the stomach of the intestinal contents owing to the exaggerated anti-peristaltic movements.

Not having at my disposal cultures of the Eberth bacillus, I was not able to try the serum-reaction until the patient's temperature was already normal. The blood for this test I obtained from the median vein by a syringe previously sterilized, taking four cubic centimetres. I consider it better to obtain the blood in this way than by a simple puncture, as it enables one not only to make the microscopic examination, but also to make a macroscopic examination, finding out the coagulating power of the serum. In my case, the serum-reaction gave, macroscopic-

ally, a very slight turbidness without any agglutination; microscopically, the bacilli of Eberth showed a tendency to unite in scattered groups in the centre of the field of observation of the microscope. Observing the preparation at its borders, there was noted an almost perfect agglutination, but that must not lead us astray, because we know that there is always a crowding of the bacilli near the edges of the slide, this phenomenon requiring a purely mechanical explanation. The result of the serum-reaction in this case confirms the conclusions of the studies of Widal, according to whom the agglutinating power of the serum is observed, even at the end of the infection, although rarely; nevertheless, in the greatest number of cases, the serum loses its agglutinating power at the beginning of convalescence.

As for the therapy, it was decided to control the hemorrhage with the sulphate of soda, which had been extolled by Mossé as an excellent hemostatic for intestinal hemorrhage.

In 1896, at the Congress of Surgery held in Paris, Reverdin, in his paper, said that he had tried to determine the action of sulphate of soda experimentally. Given to animals, this salt makes the coagulation of the blood more rapid, but only when given by the mouth, not hypodermically. Reverdin had good results from its use in grave capillary hemorrhages both spontaneous and traumatic, in menorrhagia and in a case of obstinate subcutaneous hemorrhage. The use of the sulphate of soda, then, in small and frequently repeated doses (gr. 0.10 every hour) is to be recommended, according to Mossé, in intestinal hemorrhages, favoring the coagulation of the blood.

My patient received the sulphate in small doses, in a little water. The results were satisfactory. After the second day's treatment, no more blood was seen in the stools. Meanwhile, all the other symptoms were improving. The temperature became normal on the thirtieth day from the beginning of the disease. The size of the spleen lessened, as well as the intestinal meteorism. There was no complication, and the examination of the urine, repeatedly made, showed the close relation between the renal function and the course of the disease. The urine, which was scanty at the height of the disease, gradually increased in quantity, while its acidity diminished. The urea, which was in the proportion of 27 grammes per 1,000, became 24 grammes per 1,000.—Translated from *Giornale Internazionale delle Scienze Mediche*, by HARLEY SMITH.

Sugary Ingredients in the Blood and Urine.

Mm. R. Lepine and Bouled, in *Lyon Medicale*, 16 June, explains their method of detecting sugary principles in the blood and urine. The quantity of these substances, in many

cases, is very delicate. There may be an uncertainty to the extent of five grammes per litre. If the polarimeter be employed, it is necessary to remember that there are some saccharine and non-saccharine substances that deviate the light to the left; glucose, however, deviates the light to the right. Some substances, as glycuronic acid, deviates the light to the right. Some saccharine substances deviate the light much more than others; maltose will deviate the light three more than glucose. Some sugars, pentoses, are inactive on light, but reduce copper. Different sugars reduce different weights of copper. One gramme of maltose reduces less copper than a gramme of glucose. There also exist in urine some agents that reduce copper which are not sugars. In the fermentation test, the same quantity of sugar gives different amounts of carbonic acid, according to the conditions under which the fermentation is done. It is thus that it is impossible to determine the exact amount of sugar in the urine. There is likely to be an error to the extent of 5 per cent.

As there is usually a small quantity of sugar in the blood it is well to use a considerable quantity of that fluid, 160 or 200 grammes. The blood is received in an acid sodium sulphate solution; it is warmed and the clot removed. The liquor is evaporated in a water bottle, some crystals of sodium sulphate, ground in a mortar and exhausted with absolute alcohol and heat, is evaporated and then made up by water until it is almost colorless.

The Treatment of Writers' and Pianists' Cramp.

Prof. J. Zabłudowski, of the University of Berlin, writes as follows in the *Revue Internationale de Therapic Physique* for April, 1901. There are ordinarily designated, under the titles Writers' and Pianists' Cramp, forms of disease whose characters are not always the same, and these differences give rise to diverse opinions on the subject of the curability of these affections. Most authors admit their incurability, and the sufferers are thus driven to take the advice of the laity, who promise a cure by doing something unusual, after their own method.

Cure will depend much less on the employment of physical means, isolated or combined, than on the possibility of finding some means of diminishing the quantity of muscular contraction, and of the work of the nerves necessary in writing and playing the piano. All treatment that falls short of this will not be followed by positive cure, as this depends upon the circumstance whether or not, during the treatment, professional work has been restrained. So also the simultaneous employment of a number of therapeutic measures, which is fashionable enough at present, may be quite injurious when the disease has

taken on chronic characters. A simple method of treatment has the advantage that it can be continued at home, in the absence of the physician, and becomes a good means of encouraging the patient to work.

As to apparatus for writing, they have only a palliative value. The cause of the disease in the pianist indicates to us the road to follow, which will consist in changing a little the key-boards of the instruments. There should be constructed for the young, pianos whose key dimensions would be three-twentieths less than the usual key. There might also be constructed pianos for which there could be adopted by choice different key-boards.

As to writers, it is necessary to correct the faults that can be seen in their mode of writing; it is necessary to relieve the points subjected to pressure, and to introduce compensations for the affected muscles and nerves. This latter task can be accomplished by submitting groups of muscles to training in order that they may become accustomed to new movements. For this training, means of encouraging the movements are required, and massage meets this requirement. The more we attempt to introduce changes in the manner of his writing by directing him differently, by causing him to hold his pen in another way than his custom, the more also shall we be able to free him from his bad habits of writing. Exercising the fingers, as in the Swedish gymnastics, is, on the whole, too coarse, and favors but little the relatively fine movements required in writing. The making of large, rounded initials, allowing to the hand a freedom of movement in different directions, is a very proper education of the muscles, fingers and hand. The gradual passage from large to smaller letters accomplish the same end. Often the cramp can be prevented by not allowing the fore-arm to rest in the same place while the hand writes an entire line, but by shifting it parallel with the axis of the hand as soon as one, two or three words are written. By this means also rests can be introduced in the body of each letter at the points where the pen has a tendency to stop, that is where the two strokes cross and form an angle, and in the long letters, at the points where the principal stroke crosses the upper or lower limit of the writing.

In bad cases, that is to say, the cramp properly so-called, every attempt to obtain a suitable form of writing must be abandoned at once. The treatment will be reduced to the employment of an apparatus of simple make, which will allow the muscles habitually used in writing to rest, and to bring into use other movements of the fingers. In those cases where writer's cramp is caused by a central neurosis, hysteria, neurasthenia, a systematic psychic treatment must be carried out

Massage is of much value, as it has excellent effects in the hypochondria, which constantly accompanies these cases. In fine, to strengthen the effect, the manipulations of the massage should be limited to the parts supposed to be affected by the physician, as well as by the patient.

Energetic and repeated strokes or percussions which cause peripheral irritation will exercise a repressing influence and aid in stopping the cramps. It would be very useful, as a prophylactic, if the instructors in writing gave careful attention to the correction of the faults in the method of writing so common among pupils.

Among pianists, we have to do for the most part of the time with forced fingers, caused by the keys being too large for those hands below the medium size. The difficulty of executing some musical compositions, which call for the very wide separation of the fingers, must not be overlooked in certain persons. The neuritic is the most frequent form of the malady. The pains often extend above the neighboring points and radiate into the shoulders, the back and the breast. In point of frequency, the paralytic form comes next to the neuritic. The cramps occur, when the affected pianists cease playing, soon enough. The peripheral malady exercises a very considerable influence of the general state of health among persons whose nervous system is quite normal. Among those affected with writer's cramp, we often meet persons whose nerves were already weak.

There is no doubt that the pianos for the young, made after the manner described, will come into wide use, as they do not require any new method of education. In passing from the smaller to the larger keys the hands develop better, and there will be little likelihood of cramps or paralysis.

Cardiac Hypertrophy in Nephritis Aplasigne.

Dr. L. Bouveret, of Lyons, in the *Lyon Medicale* for 7 July, discusses a phase of chronic nephritis and its relation to cardiac hypertrophy under the above title. He points out that all cases of interstitial nephritis are very liable to be accompanied by enlargement of the heart, as pointed out by Tranbe. This is true of 93 per cent. of the cases. There are some exceptions, however, to the rule. Some conditions prevent the occurrence of the heart enlargement in renal sclerosis. These are advanced age, tuberculosis, and cachectic states. But the writer calls attention to another group of cases. He describes cases of renal sclerosis with very contracted kidneys, uremic attack and death among four adults, and, without cardiac enlargement. These cases are nearly always chlorotic and anemic. This is the group that he calls *aplasia vasculaire*. There is a badly

developed condition of the heart and vessels. Laucereau was the first to point out the fact that in badly developed states of the vascular, sclerosis of the kidneys did not cause enlargement of the heart. Dieulafoy called the condition chloro-fritism. This condition vascular aplasia prevents, to a great extent, the tendency of renal sclerosis to increase the work and size of the left ventricle. In the badly organized and developed state of the vascular system, chronic contracted kidney is very dangerous. The end may come with great rapidity with attacks of uremic convulsions. It may be that the kidney, so closely connected with the vascular system, shares in the faulty development of the latter, and thus fails early to do its work as a depurating organ. The cardiac hypertrophy, in most cases of renal sclerosis, is a benefit as it maintains arterial tension and diuresis. In the cases discussed in this article, this vascular tone is wanting, and the end comes all the sooner.

Cancer of the Uterine Neck.

At the recent meeting of the American Medical Association, Dr. J. M. Baldy, of Philadelphia, read a paper upon the above subject. He takes a very gloomy view of the curability of cancer of the cervix. He passes under review the statistics on the disease and the results of operations that have been performed for its relief. He holds that these statistics do not show that 5 per cent. of the cases have been cured; but he is strongly of the opinion that 2 per cent. would be nearer the truth. He contends that to do anything towards the cure of these cases the diagnosis must be made at an early period in the disease. He denounces the tendency of the present day to pay so much attention to laboratory work and so little to clinical study and symptoms. He takes strong exception to recent statements that "the early stages give little or no clue to the real nature of the disease." He attaches great importance to the three great symptoms: pain, odorous discharges, and hemorrhage. If these are accompanied by loss of flesh the case is very clear. These symptoms, properly studied, will enable one to make an earlier diagnosis than by the microscope.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES F. W. ROSS, ALBERT A. MACDONALD,
AND K. C. McILWRAITH.

The Diagnosis of Cancer of the Womb. — By FREDERICK J. McCANN, M.D., C.M., Edin., M.R.C.P., Lond. Physician to Out-patients, Samaritan Free Hospital for Women, London.

It has now been proved beyond doubt that if cancer of the womb be diagnosed at a sufficiently early stage in its course, it can be cured by operation. I will first narrate a typical example of cancer affecting the neck of the womb, and then indicate some of the pitfalls in diagnosis.

A married woman, aged fifty-four, was admitted into the Samaritan Free Hospital under my care on July 13th, 1896.

History.—At the end of February, 1896, she noticed a discharge of blood from the vagina, which continued daily until her admission into the hospital. It was never offensive. She did not complain of any pain, and was always able to work, but was losing flesh. The menopause had occurred seven years previously, and she had had no blood loss until her present trouble commenced. She had had five children (twins twice) and two miscarriages. She was fairly well nourished, with no cachexia. Her appetite was good and she slept well.

On bimanual examination the uterus was found to be freely movable. There was no infiltration of the broad ligaments. A nodular growth was felt, involving chiefly the posterior lip of the cervix, and extending upwards into the cervical canal. The appearance of the growth by the speculum suggested malignant disease, the surface bleeding readily when touched.

Operation.—On July 17th I performed vaginal hysterectomy. The operation occupied thirty-five minutes. The patient recovered and has remained free from recurrence. The growth was proved by microscopical examination to be a columnar-celled carcinoma.

Hemorrhage.—This case illustrates the importance of hemorrhage as an early sign of cancer of the neck of the womb. The bleeding may at first be small, occurring only after sexual intercourse. Later it may be evidenced by increased menstrual flow, and when this ceases a sanious watery discharge remains. In other cases a somewhat profuse bleeding suddenly occurs, which may be regarded as a miscarriage. If, however, bleeding appears after the menopause a thorough examination of the pelvic organs should be made, as this is always a sign of some pathological process. The same is true of the profuse hemorrhages which occur at the climacteric.

There is still a widespread belief that the great sign of cancer of the womb is a putrid discharge, but in early cases the discharge is not foul smelling, and the septicity of the discharge indicates sloughing of the cancerous surface, due either to an advanced stage of the disease, or to infection by fingers, syringe or other instruments. In fact a cancerous growth may attain considerable proportions without causing any fetid discharge.—*Brit. Med. Jour.*

Puerperal Eclampsia; Four Cases Successfully Treated by Rectal Injections of Chloral Hydrate.—By W. B. HALLOWES, L.R.C.P.

The author reports four cases of puerperal eclampsia in which the injection, per rectum, of sixty grains of chloral hydrate in one ounce of water, gave prompt relief. The injections were repeated every three hours, and in no case were more than four given, recovery being uneventful in each case. All the cases were at or about full term.—*New York Med. Jour.*

On Fibroids of the Cervix Uteri.—By DR. A. H. N. L. LEWERS.

The author confines his remarks to interstitial and subperitoneal fibroids of the cervix. Their importance is largely a matter of size; when small, they cause no symptoms, but when they reach the size of a cocoanut and upwards they should be removed. If left alone, pressure symptoms will arise in course of time. Menstruation may be scanty or profuse. An important point in diagnosis is to recognize the difference between a submucous fibroid of the cervix or body, which is felt through the dilated os uteri, and a fibroid of the cervix, which is truly interstitial. In the former case the tumor may be safely removed by *morcellement* through the vagina. Such fibroids, if left alone, become infected and break down, producing general sepsis. In removing such tumors, the deep cervical attachments must be separated before they can be drawn up to and out of the abdominal wound. Four cases of cervical fibroids are reported, the patients all recovering perfectly after operation.—*New York Med. Jour.*

Palliative Treatment of Cancer of the Uterus.

G. R. Leighton, M.B., C.M. (*Brit. Med. Jour.*, March 16, p. 634).—A widow, aged 71, was seen in May, 1898, for cancer of the cervix uteri. Hemorrhage was always controlled by ergot internally, and when severe by subcutaneous injection of ergotin. For the offensive discharge a solution of sulphate of zinc was used in the earlier stages, but later nothing was so satisfactory as a carbolic douche (1 to 40).

After six months the pain was constant and intense. Liq. morph. hydrochlor., chloral hydrate, and morphine suppositories were used, but these began to lose effect, and the writer was continually called up at night to give hypodermic injections of morphine to induce sleep. The relief obtained was only evanescent, and the patient was rapidly being worn out by the intense suffering. The writer then acted on the advice: "If everything else fails, turn the patient into an unconscious opium eater." At this time, December, 1898, she was taking from 3 to 5 gr. of opium daily. He decided to push the opium, and finding that the tincture of opium had a more lasting effect than the liquor morphine, he discarded the latter. He gave 15 m. every four hours, worked about 6 gr. of opium in twenty-four hours. In a few days he gave a dose every three hours, or 8 gr. a day. In a fortnight the patient was free from pain for six or eight hours at a time, during which refreshing sleep was obtained. She soon began to improve in her general condition. She took food well, and instead of dying, as was expected a few weeks before, began to go out in her carriage a little. The dose had to be constantly increased, however, to secure this immunity. Six months later, in June, 1899, she was taking 3 oz. of tincture of opium daily, or about 99 gr. of opium; a month later 4 oz. As tolerance became established the dose was further increased, but 5 m. of tincture of belladonna were added, night and morning, which assisted the action of the opium. By August, 1900, she was taking daily 6 oz. of laudanum, or about 198 gr. of solid opium. Three months later she was taking 8 oz., or 264 gr. of opium daily, and on some days, when the pain threatened to become severe, she took over 12 oz., or nearly 400 gr. This dose was continued, one day a little more, the next a little less, till October, 1900, when she collapsed somewhat suddenly, and, after a week of extreme prostration, died.

The patient lived two years longer than was at first thought probable, and the last eighteen months of the disease were much more comfortable than the first twelve. She had severe pain at times, but it was tolerable, and never so distressing as in the early stages. Throughout the last two years there was no difficulty with the bowels, or head symptoms, and a plain milk diet was well taken. Towards the end the growth extended to the bladder and rectum.—*Med. Review.*

Cystitis—Peculiar Condition of Uterus in Pregnancy.

Dr. Howard A. Kelly, at a recent meeting of the Johns Hopkins Medical Society, spoke of a drainage in bad cases of cystitis. Here attempts to wash out will be cut short on account of the pain. Dr. Kelly treats such cases by placing the patient

in the knee-breast position and letting air into the bladder through the cystoscope. He then thrusts in a narrow-bladed, specially made knife, set at an angle with the handle, and draws it downward toward the urethra, leaving a free opening into the bladder for escape of urine. Dr. Kelly urged the importance of making topical examination of the bladder before commencing treatment in cases of apparent cystitis. He had had cases which had been treated elsewhere for a length of time for cystitis, when on using the cystoscope a stone was seen, and on its removal the symptoms disappeared. He spoke also of peculiar cases of pregnancy which he does not understand. One part of the uterus softens down and the rest remains rigid; the softened part may bulge. In his case it was mostly toward the patient's right. The patient was the wife of a physician from Iowa. He was advised to let it alone, and returned home, where his wife had a normal labor. In another case, the wife of an army surgeon, the abdomen was opened and the right upper horn of the uterus found to be softened. The patient later aborted per vias naturales. In a third case exactly the same condition was found. Dr. Kelly would call it "Apical pregnancy," and it is liable to be mistaken for extra-uterine pregnancy.—*Jour. Amer. Med. Asso.*

Extra-Uterine Fetation.

John D. Malcolm, Surgeon to Samaritan Free Hospital, in his paper in the *British Medical Journal* of 13th July, states that an extra-uterine pregnancy may go on to full term, and give rise to symptoms that would lead the patient to regard herself as pregnant in other than the usual way. He also believes that pregnancy may take place in the ovary, or in the peritoneal cavity, as the latter may develop sufficient vascular activity to maintain the growth of the fetus. In cases where the gestation occurs in the tube, it may be in the tube proper, or that portion of it within the uterine. The great majority of all ectopic gestations occur in the tube outside the uterine wall. The author does not think that when the tube ruptures, the fetus can develop free in the peritoneal cavity. He is of the opinion that, when the gestation continues after the rupture of the tube, the amniotic sac remains intact. In the early stage of fetal development the charion is the only covering. The amnion is formed later, and gradually enlarges until it comes in contact with the inner surface of the charion. There is often a substance like Wharton's jelly between them. When the tube ruptures, the charion is liable to rupture also, leaving only the amnion. In this condition the fetus may go on to term or longer. But as the fetus is developing in the tube, the layers of the broad ligament may be separated. The rupture of the

tube may then occur in such a way as to permit of the fetus and membranes escaping into the space between the folds of the broad ligament. If the amnion does not rupture, the fetus develops here as well as in the peritoneal cavity. In such a case, the tube and uterus is most likely to be lifted up into the abdominal cavity, so that the uterus may not be within reach of the finger. In cases where the rupture is into the peritoneal cavity, this would not be the case; and the placenta would be in the pelvic cavity. When the tube ruptures, there is not room on its inner surface for a full-time placenta, so that, if development goes on, the placenta must take on new attachments to adjacent parts. This fact explains to a great extent the ease or difficulty of operative treatment. Hardly any two cases can be alike for this reason. In all cases rupture, or the death of the fetus, must come sooner or later. In the great majority of cases, the death of the fetus occurs within a few weeks after conception. When the fetus dies from some cause within itself, there is a fair chance that it may shrivel up and become encysted. In some cases, the fetus may remain almost unchanged, whereas in others the soft parts disappear and the bones only remain. When the pregnancy goes on to term, the fetus must die unless removed by operation. After its death it may shrivel up, or be absorbed, but most usually some inflammatory process sets in. The fetus may be discharged by suppuration. There is much risk, however, of the large sac opening into some portion of the bowel, and septic infection is very likely to occur. In such cases, the intestines and the amnion have become so attached that the removal of the fetus and its secundines is practically impossible. All that can be done is to remove the fetus and keep the sac as clean as possible. When a rupture of the tube occurs, or if there be a separation of the placenta, there is no likelihood of the hemorrhage becoming arrest, as in the case of a normal pregnancy, by uterine contractions. There should be no delay in performing the requisite operations for the treatment of the case. No good can come from waiting and permitting further hemorrhages to take place. If the first hemorrhage be slight, the second may be copious, and therefore the patient is in imminent danger. If the fetus is still alive and the tube unruptured, delay is only to court some worse condition. If the case is diagnosed, it is much better to operate before rupture occurs. To postpone the operation until the fetus dies, in order that hemorrhage be lessened, is likely to be met with the greater difficulty of suppuration, or many inflammatory adhesions. Some may not agree with the advice to operate in all cases; but to watch a fetus develop to term outside the uterine cavity will subject the patient to far greater risks than immediate operation.

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF J. PRICE-BROWN.

Air Currents in Nasal Respiration.

Charles A. Parker (*Jour. Lar. Rhin. and Otol.*, July, 1901), Surgeon to the London Throat Hospital, controverts the long-established belief that the air during inspiration passes through the lower part of the nasal cavities, and over the lower turbinates. He does so for the following reasons:

1. Patients with an absolutely free inferior meatus and post-nasal space will often complain of stuffiness and inability to breathe through the nose.

2. Hyperplastic or edematous enlargement of the middle turbinates, especially of their anterior ends, or muco-purulent catarrh affecting the middle meatus, may cause difficulty of nasal respiration, although the lower passages may be unusually patent.

3. Polypi will cause marked nasal obstruction, even in slight cases, where the inferior meatus is quite free.

The observation of these facts, as well as the discussions of other writers upon the subject, induced Parker to make a series of special investigations. For this purpose he examined normal noses and those affected by spurs, septal deflections, hypertrophic rhinitis, etc., etc., and then gave the result of his observations.

To test the direction of the air current in inspiration, he had his subject inhale through the nostrils air saturated with the fine powder of lycopodium, making an intranasal examination immediately afterwards. To test the direction of the air current in expiration, he had the subject exhale cigarette smoke through the nose, watching its course at the time by means of the nasal speculum.

Numerous experiments were made, and all were followed by results which led to the conclusion: that, in the normal nose, the air during inspiration is always drawn upwards and backwards during the first part of its course, missing the inferior turbinate and gliding over the middle and superior turbinates; and then in the second part, downwards and backwards through the upper portion of the posterior choana, entirely missing the whole inferior meatus, and only slightly brushing the inferior turbinate.

In expiration the current passes through the lower nasal passage and over the inferior turbinate, missing entirely the middle and superior turbinates and the middle meatus. It is when the middle and upper passages are closed, that the air is inspired through the inferior meatus, producing a stuffy feeling

even when the passage itself is freely open. Hence it follows with regard to spurs, deviations, hypertrophies, nasal polypi, adenoids, etc., that all enlargements affecting the upper meatuses will have the effect of impeding inspiration to a more or less extent; while hypertrophies of the inferior turbinates, or within the inferior meatuses will impede expiration.

Case of Long-standing Deafness Cured by Clearing the Nose and Naso-pharynx.

Mayo-Collier (*Jour. Lar. Rhin. and Otol.*, July, 1901) showed a young lady, who had been deaf for seven years and had suffered from sore throat all her life. She could only hear when shouted at; conversation being extremely difficult. Never had pain nor discharge from either ear; but there was constant loud tinnitus. Both drumheads were depressed. Operation restored hearing of watch at twelve inches.

Fibroma of the Tonsil.

Prota (*Arch. Ital. de Laringologia*, January, 1901) describes the history of this disease at length, together with the report of a case. It occurred in a woman, aged 50, who had suffered frequently from tonsillitis. The fibroma was large, pedunculated, and curved "like an eagle's beak." The base was three centimetres in diameter, and the attachment to the upper part of left tonsil. There was no pain nor glandular enlargement. It was removed by snare under cocaine. Microscopical examination proved the correctness of the diagnosis.

External Palpation of the Tonsillar Region.

Minerbi (*Balletino*, April, 1901), in speaking of the difficulty in examining the inflamed throat of a child, dwells upon an external sign, which he has frequently observed, and which he considers of much value in diagnosis. This is the swelling of the amygdalic glands of Chassaignac, in the superior triangle of the neck; which always occurs in acute tonsillar inflammations of children, and particularly in diphtheria. This triangle is situated between the angles of the jaw, the anterior margin of the sterno-mastoid, and the greater cornu of the hyoid. One must beware of confounding the glands of Chassaignac with a more superficial and mobile group, which occurs in the superficial fascia immediately below the angle of the jaw.

Another group of glands, which the writer calls the inferior amygdalic glands, are situated external to the greater cornu of the hyoid bone; and although the two groups commence to swell almost synchronously with the onset of throat fever, the latter ceases with the cessation of the fever, while the swelling of the true amygdalic gland remains for some time afterwards.

Stenosis of Larynx following Fracture. Operation. Recovery.

Arthur W. Watson (*Laryngoscope*, July, 1901). The patient, a youth aged 16, sustained a lacerated wound beneath the chin. Sutures were inserted. There was no dyspnea, but the voice was lost, and there was bloody expectoration, as well as dysphagia. Six weeks later dyspnea developed, and in three weeks became so severe that operation became necessary. It was found on examination that the thyroid angle was flattened and the ventricular bands united. The union between the latter was cut, and an intubation tube inserted. Tubes were worn of gradually increasing size for nearly three months; and although O'Dwyer's largest was replaced at last by a still larger one of hard rubber, dyspnea always immediately followed its removal.

Radical operation was then resorted to. First, tracheotomy was performed; and three weeks later, or six months after the original fracture, the operation of laryngo-fissure was done. When the wings of the thyroid were separated it was found that from the thyroid notch to below the vocal cords, the cartilage was a quarter of an inch thick, and one-third of an inch from before backwards; pushing the ventricular bands upward and the anterior commissure of the vocal cords backward.

The redundant cartilage was cut away and shelled out. In closing the thyroid a catgut suture was passed through the two sides of the cartilage, also through the two ends of the vocal cords and then tied. The recovery was good; natural breathing and the voice being restored. The tracheal tube was retained for two weeks and then removed.

Laryngeal Phthisis or Consumption of the Throat. By RICHARD LAKE, F.R.C.S.

This is the title of a monogram of which the *Journal of Laryngology* speaks in the highest terms. It is the record of the treatment of three hundred cases at the North London Hospital for Consumption, with the results. Mr. Lake is a strong advocate of the surgical treatment of laryngeal phthisis, in carefully selected cases. He has rarely seen free removal of intra-laryngeal tissue attended by hemorrhage.

In tubercular infiltration of ventricular bands, he advises removal by cutting forceps. Again, the author says, "In almost every case of inter-arytenoid thickening, one should operate with only very moderate delay, to test the efficacy of treatment." In one case he removed the whole of the epiglottis with the galvano-cautery snare.

Of local applications, Mr. Lake has had the best results from the application of a 5 per cent. solution of commercial formalin, followed immediately by a 3 per cent. to a 10 per cent. solution of freshly prepared protargol, these applications should be applied daily. He has not found submucous injections satisfactory in their results.

Editorials.

APPENDICITIS.

Twenty years ago we heard much about peritonitis, local and general. In those days the relationship of the appendix to inflammations in the abdominal cavity had received practically no study. Dr. Fitz was one of the first to direct attention to the importance of inflammation of the appendix. His papers appeared in 1886. During the past ten years a vast amount of work has been done upon the subject of the appendix and its diseases.

For the sake of convenience, appendicitis may be divided into the following types: Those cases where the mucous membrane is inflamed and that may end in recovery or pass on into a severer form; those cases with adhesive inflammation, ending in recovery, or in the formation of a circumscribed abscess with or without perforation; cases with perforation or gangrene, ending in general peritonitis; and relapsing cases. Many other classifications have been made, but the above will be found to cover the ground. For example, cases with perforation, or gangrene, may be very acute and of the fulminating type; the relapsing form may fulminate in one of the attacks; the simplest form may become purulent and perforate, and the circumscribed abscess may become diffuse, causing general peritonitis.

There are some points in the anatomy of the appendix of considerable importance. One of these is that it may be situated behind the cecum, and not surrounded by the peritoneum, so that an abscess would form in the retroperitoneal tissue. Such an abscess would burrow in different directions behind the peritoneum. Another feature in the anatomy of the appendix that must be borne in mind, is the variation that may be found in its position. It may be directed upwards towards the liver or right kidney, or inwards towards the mid-line, or lie behind or outside of the cecum, or dip down into the pelvis, and be attached to some pelvic organ. It may vary from one to nine inches in length. The peritoneal covering and meso-appendix vary considerably. Sometimes the meso-appendix is almost

entirely wanting, or so constructed as to curl it up, favoring cystic formation, or empyema of the appendix. When it is absent the appendix is usually attached to the posterior aspect of the cecum. There is a very abundant supply of lymphatic tissue in the appendix. This favors the taking on of inflammatory processes. The wall of the appendix is thick and rigid, and contains much muscular and fibrous tissue. The resistance of these tissues often leads to perforation or gangrene, when the lymphatic tissue in the mucous membrane becomes inflamed, as they cause constrictions in the organ and strangle off the circulation.

The parts mainly affected in the disease are the cecum, the appendix and the peritoneum. Attacks may begin in the cecum. Constipation, typhoid fever, tuberculosis, or a foreign body may give rise to ulceration or perforation of the cecum, causing perityphlitis and an abscess. With regard to the appendix the following conditions are met with in different cases: Chronic inflammation of the mucosa, the presence of cysts, closure of the appendicular canal, ulceration and gangrene. When the canal is partially closed there is a distinct tendency to the formation of cysts. Ulceration frequently ends in perforation. Chronic inflammation of the mucosa destroys the epithelium and there may ensue infection and general peritonitis. The gangrenous condition of the appendix may result from the catarrhal or ulcerative condition, but usually is an infective inflammation of the tissues of the appendix, the offending germ generally being the *bacillus coli communis*. As to the peritoneum, several conditions may be present. There is always some peritonitis in every case of appendicitis. There need not be ulceration or perforation for this to occur. The peritoneum may form firm adhesions. This is specially likely in the catarrhal and cystic forms of appendicitis. These adhesions may wall off the appendix and be capable of circumscribing the pus. The peritonitis may be local or general. In the latter case it may be general from the first, or it may become general from the bursting of an abscess into the general peritoneal cavity. When there is either perforation or gangrene of the appendix, with circumscribing adhesions, the general peritoneal cavity is at once and primarily involved.

The disease is four times as common among males as females;

it occurs most frequently between the ages of 10 and 20; is met with oftener in the summer months; is caused in about 8 per cent. of all cases by injuries, and is preceded, in the great majority of cases, by some form of digestive derangement, as diarrhea or constipation. Foreign bodies entering the appendix, or forming in it, play an unimportant part in the causation of appendicitis. These inflammations are of bacterial nature. But the bacteria lying in the intestinal canal, usually harmless, may become very virulent, if the health of the parts are deranged by constipation, diarrhea, indigestion or injuries.

THE PREVENTION OF TUBERCULOSIS.

At the Congress on Tuberculosis, held in London a short time ago, Dr. Robert Koch, whose name is so well known as the discoverer of the tubercle bacillus, gave utterance to the following views in his able address. The disease is so seldom hereditary that this source for it may now be practically ignored. The great source of infection in man is the sputum. When consumptives talk and cough they expel from their lungs particles of phlegm laden with the germs of the disease. The sputum is expectorated on the ground and streets, and often on the floors of inhabited dwellings. From these sources the bacilli rise in the air as dust, or are dragged about by clothes and foot-wear. The common use of towels, bed clothing, cups, etc., is highly dangerous. When the population is dense the disease is more prevalent. Overcrowding is very prone to spread the infection. All consumptives should exercise the utmost care not to infect clothing, and to dispose of their sputum properly. All houses where consumptives have lived should be thoroughly disinfected before they are occupied by any one else. Advanced cases should be isolated as much as possible. Whole families have been infected by neglecting these precautions. There should be special hospitals for the consumptives. This would afford a means of treatment and cure for the early cases, and isolation for the advanced and incurable cases. As hospitals are now conducted, they do not desire these cases. These hospitals would gather in the consumptives and separate so many centres of infection from the

community. Some system of notification should be established. This would require proper steps being taken to see that safeguards were thrown around the cases; and also to furnish them with suitable information on the disposal of the sputum. It would also supply the needed information as to what premises should be disinfected. By a vigorous application of these means, consumption can be stamped out, as has been the case with leprosy.

EPILEPSY.

In some cases of epilepsy organic disease of the brain is found after death. Injury to some portion of the brain cortex may set up convulsions with loss of consciousness. These attacks may occur throughout the life of the patient. The convulsions may be local, or may become general.

In most cases of epilepsy, however, the nerve matter appears quite normal. The thickening in the meninges in chronic cases is secondary. At the moment of an attack there is venous engorgement of the brain and various organs. As to the microscopic changes that have been described as occurring in epilepsy, it may be said that they are similar to the changes found in other diseases of the nervous system, and must be regarded as the result and not the cause of the epilepsy. The various morbid changes that have been noted, as present in the brains of those who have suffered from epilepsy, are too inconsistent to warrant any safe deductions. The spasm which is such an important feature of epilepsy, must be regarded as an excessive action, or discharge, of the grey matter. The sensations and loss of consciousness must also be regarded as a discharge in the sensory regions of the brain. The sensory regions are so intimately connected with the motor regions that a discharge in the former may readily excite the latter, and thus motor spasm will follow, an auditory or visual sensation or aura.

The teachings of pathology and morbid anatomy, as well as those of experiment, show that the seat of the discharge is in the cerebral convolutions. Injuries and diseases of the motor convolutions cause convulsions. Stimulation of these convolutions by experiments produce the same results. Further

experiments on the sensory centres have caused convolutions through the connection of these with the motor centres. The spasms are tonic and clonic. It has been fully established that clonic spasm is due to discharge of the cortex. This discharge may give rise to tonic spasm also. Tonic spasm alone is frequently due to irritation of the base of the brain. But this irritation may extend upwards, and a spasm that is basal in origin may become cortical and change from the tonic to the clonic type. The onset of an attack of epilepsy is so uniformly that of some group of muscles, or some one of the senses, which are known to have their representation in some given portion of the brain cortex, that there is no longer room for doubt as to the portion of the brain where the discharge commences. Even those cases where the aura is in the regions of distribution of the pneumogastric and sympathetic nerves are undoubtedly cortical, as all the organs of the body have their cortical representation, including those supplied by these nerves.

It is also well established that the loss of consciousness is not dependent upon vascular changes. The brain is not congested because the face is flushed, nor is it necessarily anemic when the face is pallid. The loss of consciousness may be complete without cardiac or pulse failure. Severe anemia of the nervous centres will cause both loss of consciousness and convulsions. It does not follow that such a state of anemia is the cause of these phenomena in epilepsy. Convulsion is not a feature of cardiac syncope, and the resultant brain anemia.

There is no foundation for difference of seat of the origin of spasm because it is clonic or tonic. If there be remissions in the tonic spasm, the clonic form of spasm results. On the other hand, if the remissions be compressed, the clonic passes into the tonic. Tonic convulsion is clonic compressed, clonic is tonic spread out. They are both cortical in origin.

There are some grounds for thinking that the point of discharge is not the cerebral cell, but the fine dendrites. These dendrites are not roots of the cells, but the origins of the fibrils of the nerve fibres, as they pass through and beyond the nerve cell, to spread out in the spongy matter of the brain. Thus the dendrites begin in the spongy matter, pass through the cortical cell, and are gathered together as the fibrils that form a nerve fibre; the dendrites, the cell, and the fibre constituting a

neuron. These dendrites do not join other dendrites from other neurons, but come into such close proximity to them that the stimulus may flow from one dendrite to that of another neuron, and thus the discharge may spread with rapidity and readiness. Sensation begins in the peripheral ends of the fibrils and passes to the centre. Discharge may begin in the central end, the dendrite, and pass out to any given muscle fibre, causing its contraction. If the waves of discharge are very close upon each, the contraction will become continuous, or tonic. If the waves of discharge are separated, so will the contractions, and the result will be a clonic action of the muscle fibre.

There is no doubt but that the discharge in disease is the same as the liberation of energy in health. There is some chemical change. These changes in the composition of tissue take place with great rapidity in health, as shown by the suddenness of reflex action. In like manner there is some instant interchange between the blood and the reserve matter that forms the chemical basis for the discharge. This leads to the view that the molecular changes in epileptic discharge is some as yet unknown, nutritive change. There is some state of instability. There may be a great readiness to the release of energy to an unusually slight stimulus. As this process is repeated, the discharge becomes easier of production. Thus epilepsy, like acquired movements, becomes self perpetuating. There is in many cases a further instability that gives rise to post-epileptic attacks of mania, automatic action and hysterical seizures.

INTUSSUSCEPTION IN CHILDREN.

We publish in this issue a synopsis of an admirable discussion on this subject which took place at the last meeting of the British Medical Association in Cheltenham, and was published in full in the *British Medical Journal*, September 7th. We fear that the mortality from intussusception in young children in Canada has been extremely high. We are not sure that in a majority of cases a correct diagnosis has been made. It is perhaps not to be wondered at that general practitioners throughout the country should make many mistakes in this

respect. It happens, however, that the diagnosis is not very difficult in the majority of cases, if practitioners keep in mind the ordinary symptoms as described by recent authors.

We have had so much appendicitis preached to us and pounded into us (which is all right enough in a way) that we are perhaps apt to overlook the fact that the appendix is not the only thing contained within the abdomen. We have, however, no desire to cast any slurs on either our general practitioners or our surgeons, but we think that both can learn much from this discussion. When a number of representative British surgeons, such as those who were present at that meeting, express a decided opinion on any important subject in connection with their life work, we firmly believe that such opinion is the best that the world can furnish.

GIFT TO THE UNIVERSITY OF TORONTO.

Through the generosity of Professor Goldwin Smith and Mrs. Smith, the University of Toronto has just received an addition of \$10,000 to its endowment. The donation is to the library of the University, and the trustees are given an absolutely free hand as to the manner in which it shall be applied to the various departments of the library. Mr. Goldwin Smith's letter offering the donation was addressed to Sir William Meredith Chancellor of the University, and was as follows:

"Dear Mr. Chancellor,—England is celebrating the millenary of King Alfred, who, as it chanced, is the patron hero and the legendary founder of my Oxford College.

"My wife and I wish to be permitted to pay our joint tribute to the memory of the restorer of English learning, and at the same time to show our interest in the University of Toronto.

"To enable us to do this, we hope the university will accept a donation of ten thousand dollars to its library, to be applied for the purposes of such of the departments as the trustees may from time to time determine."

Personals.

Dr. P. H. Bryce, of Toronto, Secretary of the Provincial Board of Health, went to Buffalo, September 14th, to attend the annual meeting of the American Health Association.

Dr. Digby, of Brantford, left home for an extended trip to the Pacific Coast.

Miss Snively, Superintendent of the Training School for Nurses, Toronto General Hospital, attended the annual meeting of the American Association of Superintendents of Nurses Training Schools, Buffalo, September 17th to 20th.

Dr. Perry G. Goldsmith, of Belleville, returned in the latter part of August from London, England, where he had spent six months at post-graduate work.

Dr. Donald J. Armour (Tor. '94) was married October 2nd, to Miss Hoban in Cobourg, Ontario. Dr. Armour, who has spent the last two years in Chicago, will in the future reside in London, England.

Dr. J. J. MacKenzie, Professor of Pathology and Bacteriology, University of Toronto, spent the summer in Europe, visiting many of the larger Universities in Great Britain and Germany.

Obituary.

JOHN CONDIE THOM, M.B.

Dr. J. C. Thom died suddenly at his home in Woodbridge, September 14th. The cause of death was said to be heart failure. Dr. Thom graduated, M.B., University of Toronto, in 1864. After practising for a time in Streetsville he removed to Woodbridge. In the latter village he was engaged for many years in a large and laborious practice. He was very popular as a physician and highly respected as a good citizen by all classes of the community.

T. A. PAGE, M.D.

Dr. T. A. Page, of Brockville, received injuries by falling under a railway train, August 21st, which caused his death within a few hours. He was 44 years of age. He was a graduate in medicine of Queen's University, but had never practised on account of ill health.

Book Reviews.

The American Illustrated Medical Dictionary. A new and complete Dictionary of the terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, and the kindred branches, with their Pronunciation, Derivation, and Definition, together with new tables of Arteries, Muscles, Nerves, Bacilli, Bacteria, Diplococci, Micrococci, Streptococci, Ptomain's and Leukomain's Eponymic Tables of Diseases, Operations, Stains, Tests, Methods of Treatment, etc. By W. A. N. DORLAND, A.M., M.D., of the University of Pennsylvania Hospital, etc. Second Edition Revised. Philadelphia and London: W. B. Saunders & Co.; Canadian Agents, J. A. Carveth & Co.

It is a matter of some difficulty to make a thoroughly good medium-sized medical dictionary. To do so, an author requires extensive knowledge, clearness of thought and expression, and that good sound judgment which enables him to retain the useful and eliminate the less useful of the larger works. Judged by the standards, Dorland's Dictionary has achieved a great measure of success. A somewhat extended examination of the work shows that its definitions are clear, concise, and correct. The tables are gotten up with rare good judgment. The illustrations (many of them colored) are good. The printing is most admirably done, while the flexible leather binding is just what is needed in a dictionary. Having been revised in 1901, the most recent words, and the most recent meanings of those words, will be found here. It is thoroughly up to date.

J. T. D.

Selected Researches in Pathology. By ALEX. GUNN AULD, M.D., M.R.C.P. With Illustrations. London: J. & A. Churchill, 7 Great Marlborough Street: 1901. Price Six Shillings.

The papers, nine in all, making up this book of 153 pages, have appeared in Transactions and Journals. They are now reprinted. The subjects discussed are emphysema, pneumonia, Bright's disease, hematogenous jaundice, Addison's disease, atheroma, and aneurysm. The several articles are of very high excellence. The author is quite original in his treatment of the above subjects. While he gives a very full review of the opinions advanced by others, he does not hesitate to differ from them. It would be difficult to single out any one of the articles for special praise, and they are all so good. The book is gotten up in very fine style. It is both a pleasure and a profit to read the work.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., assisted by H. R. M. LANDIS, M.D. Vol. II, June, 1901. Lea Brothers & Co., Philadelphia and New York: 1901.

This volume has articles by William B. Coley, M.D., on the Surgery of the Abdomen and Hernia; Gynecology, by Jno. G. Clark, M.D.; Diseases of the Blood and Glands, by Alfred Stingil, M.D.; and Ophthalmology, by Edward Jackson, M.D. These articles give a full and able digest of the progress made in these subjects during the quarter. The work is well illustrated, and is of very high excellence. It is a work of much value as a handbook of reference.

Operative Surgery.—By JOSEPH D. BRYANT, M.D., Professor of the Principles and Practice of Surgery, Operative and Clinical Surgery, University and Bellevue Hospital Medical College; Visiting Surgeon to Bellevue and St. Vincent's Hospitals; Consulting Surgeon to the Hospital for Ruptured and Crippled, Woman's Hospital, and Manhattan State Hospital for Insane, etc., etc. Vol. II. Operations on Mouth, Nose and Esophagus, the Viscera connected with the Peritoneum, the Thorax and Neck, Scrotum and Penis, and miscellaneous operations, containing eight hundred and twenty-seven illustrations, forty of which are colored. New York: D. Appleton & Co. Toronto: George N. Morang & Co., 90 Wellington Street West.

We have no hesitation in pronouncing this as one of the most lucid, concise and complete treatises on operative surgery published. The description of conditions surgical is elaborate, and their operative treatment minutely yet clearly described. The necessary instruments for the many major operations are not only listed but illustrated. The chapter (xiv) on operation on viscera connected with peritoneum is most interesting reading. The many minor points of technique that are troublesome are illustrated, in fact any point that is possible of illustration explanation is beautifully and clearly done. We are particularly impressed in this chapter with the graphic description of the many varieties of hernia and their numerous methods of cure—here possibly the illustrations excel themselves. No other general work that we have seen so completely covers the hernial ground as this one does. The chapter on "Operation on the Arms and Rectum" is most complete and equally clear in every detail. We have pleasure in congratulating the Geo. N. Morang Company for the production of such an excellent work in such a truly elaborate manner. The paper, binding, press work, illustrations, etc., are all of the first-class order.

Selections.

Nutrient Enemas.

Rectal feeding is too little employed by the average general practitioner. This negligence is due to fear of bother, the disagreeable nature of the operation, and a lack of proper understanding regarding the technique. Even without trained nurses, one may teach any intelligent person, by a single lesson, sufficient to enable him or her to administer the food successfully. It is not to be expected that even the humblest country physician would do such work regularly, even if present at the proper intervals; and if doctors once realized the simple nature of the procedure, and the benefits to be derived from it, it would oftener be employed.

The best equipment is a smoothly-working piston syringe attached to a large calibre soft rubber catheter. The catheter is lubricated with glycerine or olive oil, and is left in position after insertion, until enough food has been injected; when one syringe-ful is injected, the syringe is detached and filled, and again attached to the distal end of the catheter. When enough has been injected, the catheter is removed and the patient instructed to endeavor to retain the injection by avoiding all bearing down. The discomfort generally passes away in a few moments. Catheter and syringe are then boiled and allowed to cool until the hour arrives for the next injection. The rectum should be washed out once each twenty-four hours with warm water and non-irritating soap.

In giving the injection, the patient should lie upon the left side, with the hips elevated a few inches on pillows, or the foot of the bed may be elevated on bricks or books. The fluid should be at a temperature of 100° F., and should be injected slowly. The intervals between injections may be four to eight hours.

Easily soluble medicines not likely to irritate the bowel may be often incorporated with the nutriment, and thus save the patient the annoyance of taking them by the mouth.

No one can rightly deprive a patient of the benefit of rectal feeding through a plea of inadequate equipment, or lack of skilled nurses; for any syringe will do in an emergency, and any one who can give a sick person a drink of water can operate it.

When a patient cannot swallow; when prolonged vomiting causes a threatened collapse; when any other condition excludes the advisability of administering food by the mouth; then rectal feeding is indicated. Every physician should become familiar with the simple technique and be able to give

extemporaneously the popular formulas and method of administration, and illustrate the method personally if the circumstances demand it. The mode of procedure is little different from the practice of rectal irrigation for summer disease of children; and no doctor in the coming season dare ignore the advantages of this treatment. In the name of humanity, so long as you pretend to practice medicine, practice it as well as any one can. Ignore no valuable suggestions, and learn the techniques of all the simpler plans, at least.—*Med. World.*

Pernicious Anemia.

Th. Rumpf (*Berl. klin. Woch.*) publishes the results of his analyses of blood in cases of pernicious anemia. He first turns his attention to the etiology of the disease. He can only explain the disease by looking on it as a combination of symptoms due to various causes. Of these he mentions bothrioccephalus latus in the intestine—a very rare cause—carcinoma, specially of the stomach, pregnancy and parturition, syphilis, insufficient nutrition, and pathological conditions of the gastro-enteric canal. Besides cases due to or following one of these conditions, he calls attention to those cases for which no cause can be ascribed—cryptogenetic pernicious anemia (Birch-Hirschfeld). He says that just as ill-understood as the etiology of the disease is the actual condition of the blood. The microscopical appearances are well known, but the true chemical changes have almost entirely been neglected. He conducted experiments with Dennstadt. They examined the blood of two stillborn fetuses as a control, and further compared the results with those obtained by Schmidt and other analysts. They found that the blood in pernicious anemia contained a larger quantity of water than normal blood, a smaller quantity of solids, a higher proportion of chlorine, and a lower proportion of potassium, iron, and fat. The deficiency of potassium is more evident when a comparison is made with the quantity of sodium and of chlorine. In pernicious anemia there is not sufficient sodium to "cover" the chlorine, and the potassium also is present in too small quantities to combine with all the free chlorine. In normal blood there is an excess of sodium when estimated by the side of chlorine, without any of the potassium being needed to take up the chlorine. They further examined various tissues of the body, and found that the proportion of water was higher than normal in the heart, but considerably lower in the liver, spleen, and brain. The solids were in excess in the heart, and especially in the liver and spleen. There was also a deficiency of sodium to cover the chlorine in the liver and spleen, while in the former potassium was present in a higher proportion than normal, and in a lower

The Canadian Practitioner and Review.

VOL. XXVI. TORONTO, NOVEMBER, 1901. NO. 11.

Original Communications.

TUMOR OF HAIR, WEIGHING 1 LB. 7 OZ., TWO FEET IN LENGTH, REMOVED FROM THE STOMACH OF A WOMAN, WITH RECOVERY.*

By HERBERT A. BRUCE, M.D., F.R.C.S. (ENG.),

Associate Professor of Clinical Surgery, University of Toronto; Surgeon St. Michael's
Hospital; Surgeon Outdoor Department, Toronto General Hospital.

GENTLEMEN,—The history of the case which I am presenting is briefly as follows: Mrs. G. B., aged 26, married six years; two-para. A lump was noticed in abdomen, two months previous to birth of last child, by the attending physician. He thought it twin pregnancy. The patient had no symptoms in connection with this lump. After parturition the lump was found to be unconnected with the uterus or any of the pelvic organs. The doctor then thought it was a displaced spleen. Different consultants were of the same opinion, or that it might be malignant disease of the stomach, omentum or kidney. On examination a lump could be felt and seen in the upper part of the abdomen, about 12 inches in length, the left border being slightly convex and the right somewhat irregular, but with a deep notch or sulcus in it. The lump was about five inches in width. It could be lifted forward and moved from side to side freely and downwards also to a less extent, until the lower end reached three inches below the umbilicus. It could be pushed up under the ribs on the left side, until it was almost out of reach. It seemed to be anchored somewhere behind the lower left costal cartilages. It felt very hard. No special discomfort was

* Read at meeting of Canadian Medical Association, Winnipeg.

caused to the patient by moving it about. There were absolutely no symptoms present apart from the patient's knowledge of the lump. She was never nauseated and had a good appetite. She was a little thinner than usual, but not more so than she had been after the birth of her first child. Dr. H. B. Anderson made an examination of her blood, and reported it normal, with no evidence of leukemia. Three days before the operation she ate most of a chicken, stating that she did so because she knew she would not get solid food for some time after. When I examined her I thought I could make out splenic dulness, but I did not think that the lump conformed to the shape of the spleen, and advised an exploratory operation. This I did at St. John's Hospital, on the 24th of July last, assisted by Dr. R. J. Wilson and Dr. Ross. Chloroform was given by Dr. Hendrick. On opening the abdomen in the middle line, the spleen and kidneys were found in their normal positions, but there was a large mass free in the stomach. On the anterior wall of the stomach, a greyish white area about the size of a ten-cent piece was seen. I could make out the mass to be lying free in the stomach and extending through the pylorus. It seemed like a couple of limbs meeting below at an acute angle, where there was a movable joint. The portion extending through the pyloric end of the stomach felt as if jointed. In fact it felt very much like an arm with the elbow below and wrist joint at pylorus. The stomach was brought outside the abdomen and an incision made into it between four and five inches in length, midway between the curvatures. After removing the mass of hair, the opening in the stomach was closed by a continuous suture of catgut for the mucous membrane, and a continuous suture of silk for muscular and peritoneal coats, and outside this a row of Lembert sutures. The after treatment was as follows: Eight ounces of hot salt solution every two hours. Nutrient enemata every six hours for first two days. Then salt solution discontinued, and nutrient enemata given twice daily for two days, and then once daily for a week. Twenty-three hours after the operation sips of hot water were given by the mouth, gradually increased until in six hours two ounces of hot water were given. Then two ounces given every hour. Forty-eight hours after the operation the patient was given one ounce of milk and half ounce lime-water every hour. This was gradually increased until in two days later the patient was taking three ounces of milk and one ounce lime water every two hours. Albumen water and barley water were added to the milk diet. For first four days after the operation $1/30$ grain strychnine was given hypodermically every four hours. The patient only vomited once after the operation. She sat up in bed on the sixteenth day

walked about the room on the eighteenth day, and left the hospital very well on the twentieth day. She was then taking ordinary light diet.

On examining the tumor, it was found to consist entirely of hair, twisted and intimately woven together, of a brownish color, and exactly the same shade as that of the patient. Single hairs were dissected out 10 and 12 inches in length. The mass measures 24 inches in length. The large end, which lay at the cardiac end of the stomach, is $6\frac{3}{4}$ inches in circumference; from this it gradually enlarges, until at angle it measures $8\frac{3}{4}$ inches in circumference. From angle it gradually tapers until 15 inches from large end it is $3\frac{1}{2}$ inches in circumference, and $19\frac{1}{2}$ inches from large end it measures $1\frac{1}{2}$ inches in circumference. The latter end extended through the pylorus and into



the duodenum to the extent of 6 inches, the latter $4\frac{1}{2}$ inches consisting of only a couple dozen of hairs, and being covered with fecal matter.

I think I am right in considering this case as rare, if not unique. Hair balls are sometimes found in the stomachs of ruminants, and I have here a specimen of a ball of hair found in the stomach of a cow, and kindly loaned me by Dr. Smith, of the Ontario Veterinary College. This is an average size, and only weighs six ounces. He tells me these are found in cows, pigs and sheep, and then usually in young animals, from licking one another. These balls have been found in the manger, having been brought up in the process of rumination, and dropped out of the mouth. These masses are called bezoars, or, if composed entirely of hair, trichobezoars.

My patient declares she has never swallowed her hair, and I would not consider her hysterical. There is no doubt, of course, that she did swallow this hair.

Her temperature never reached 100 after the operation, and was normal after the first three days. Pulse went up to 120 immediately after the operation, but in twenty-four hours was 110, and in three days was 80, and remained about this until she left the hospital. One of the most interesting and remarkable features of the case was the entire absence of symptoms pointing to any disturbance in the stomach. It is now three months since the operation, and she is enjoying the best of health.

In the *Medical News* of February 16th, 1901, Dr. Nathan Jacobson, of Syracuse, reports a case very similar to mine. His patient was a girl, eleven years of age. Unlike my case, she had evidence of gastric disturbance for about a year before the operation, such as vomiting of frothy mucus, and a considerable amount of colicky pains in the stomach. The photograph of the hair mass removed, which he calls a hair-cast, shows it to be very similar in shape to the one I am presenting. It is smaller, however, only weighing 15 ounces. His patient admitted that she had been in the habit of biting off the ends of her hair from the earliest years of her life. At first she thinks she did it simply because she was nervous, but later she rather liked the tickling sensation produced by the hair in its transit to the stomach.

Dr. Jacobson, in reviewing the literature, finds nineteen authentic cases where the patients have swallowed a sufficient quantity of hair to create within the stomach a hair-tumor. Only one of these was a male. Dr. W. G. Brewster, in the *Boston Medical and Surgical Journal*, reports a case in which an accumulation of hair became lodged in the small intestines, and produced intestinal obstruction. The patient, a girl of 10, survived the operation of enterotomy only five hours. The youngest patient was 10, the oldest 34. None of these patients were insane, and but few sufficiently nervous to be described as hysterical. In nearly every instance the habit of hair-swallowing was of years' continuance. In one case it had existed for thirteen years, in another fifteen, in a third seventeen, and in a fourth twenty-two. The stomach became gradually accustomed to the presence of the foreign body, and in many instances tolerated it without the slightest rebellion.

The largest mass of hair removed from the stomach, on record, is one weighing 5 lbs. 3 oz. Of the nineteen cases, ten were discovered *post mortem* and nine upon the operating table. It is very surprising that the discovery of the hair-cast was very unexpected. In not a single case had a correct

diagnosis been made, and no physician or surgeon had ever surmised that he had to deal with a foreign body in the stomach. As a rule, the diagnosis was splenic or omental tumor, or movable kidney, or fecal or other impaction in the transverse colon. As a rule, the hairs had simply been bitten off the ends of braids or flowing locks, but in other instances hairs of great length were found. One woman was said to have pulled the hair out of the back of her head whenever she became nervous, rolling it up into a ball and swallowing it; while another deliberately swallowed her combings night and morning.

INTESTINAL OBSTRUCTION FROM A SURGICAL STANDPOINT.

By J. P. RUTHERFORD, M.D., CHATHAM, ONT.,
Surgeon to St. Joseph's Hospital; Surgeon to C. P. R.

The mortality rate of the human race has diminished considerably from the time when this grave malady was first treated surgically. In olden times, when distension of the gut with air or water was the only method of treatment, the prognosis was very unfavorable, but surgery has made such rapid strides in the last decade, that at the present time a person suffering from intestinal obstruction has a very good chance of recovery.

After the diagnosis has been made, and all efforts of distending the gut with air or water have failed to remove the obstruction, celiotomy is always resorted to by a follower of modern surgery.

Distension with air and water is, I think, a dangerous practice, because by this means the bowel, which is in a weakened and distended condition, is very prone to rupture. Then, again, the uncertainty of success, together with the loss of time, is enough to condemn that old-time practice. While successes under this method of treatment have been reported, still if it should prove unsuccessful, I would advise that the patient should not be allowed to come out from under the effects of the anesthetic, but should undergo a laparotomy.

Having introduced my subject, I will now proceed to describe three cases, two of which are intussusception, while the third is intestinal obstruction from stenosis.

Case I.—J. G., male, age 22, came to my office on Saturday. Symptoms: He complained of vomiting, which came on suddenly. He knew no assignable cause for it. Had no fever nor tenderness over abdominal region. I gave him stomach-

sedatives, and calomel to be followed by magnesium sulphate. These had no action. Next day, Sunday, I visited him and found him very sick. He had no passage from the bowels, and had several attacks of vomiting. Patient was removed to the hospital and given enemata, which simply moved lower bowel. Monday, temperature, 99.2; pulse, 80. He had vomited everything taken per mouth. Physic increased vomiting and pain. He had passed no mucus nor blood per rectum, nor could a tumor be felt in rectum. Some tenderness and swelling had begun to appear, however, two inches to the left of McBurney's point. Diagnosis of intussusception rather than appendicitis was made on account of mode of onset, location of tumor and temperature. Elevation of temperature came on late from local peritonitis due to disturbed circulation. A consultation was held, and it was decided to operate the next morning. Wednesday, fourth day: pulse, 96; temperature, 100.2. Pain and tenderness had increased, and stercoraceous vomiting had occurred. On opening the abdominal cavity I found an ileal intussusception about two feet from the ileo-cecal valve. On the withdrawal of the invaginated portion of gut, a large body, symmetrical and movable, was found inside the ileum. We then deliberated whether we would do an enterotomy, but decided to work it through the collapsed portion of gut into the ascending colon. This was done. The great omentum was spread carefully over the intestines and the wound was closed by interrupted sutures *en masse*. No bad symptoms followed, and he had a natural movement by the bowels on the third day after the operation. He made an uninterrupted recovery, and left the hospital in four weeks. He is now ranching in the North-West Territory.

Case II.—Intussusception. Mrs. B., age 45. Etiology: It was supposed to be caused by lifting a boiler from a stove. Symptoms: Patient complained of vomiting, the onset of which was sudden. She passed mucus, but no blood. A tumor could not be felt in the rectum, but one could, however, be plainly seen to the left of the umbilicus. Physic was given with no success, and on the fourth day after a consultation, I decided to do a laparotomy. On opening the abdominal cavity an ileal intussusception was found, and the intussusciens, when reduced, was very dark (ashen grey) in color, and very much distended. However, on the application of towels, dipped in hot saline solution, it improved in color, and consequently an enterectomy was thought to be unnecessary. A peculiar incident in this case was as follows: The appendix was found encircling and firmly adherent to the ileum. After the adhesions were separated it was removed. Patient rallied from the shock

of the operation, and had a natural movement of the bowels on the second day afterwards without the intervention of aperients or enemata. She made a hasty recovery, and was doing her household work in five weeks.

Case III.—Intestinal obstruction. Mr. B., age 40. He, of late years, had considerable trouble in keeping his bowels well moved. Finally they would not move, and suffering severe attacks of vomiting he consulted me. Kelly's sigmoid flexure tube, injections of water, and everything known to the arena of physic were tried, but to no avail, and consequently after a consultation laparotomy was deemed the wisest procedure. Operation as follows: The abdominal cavity was opened, and the ileum was found firmly adherent to the parietal peritoneum about three feet from the ileo-cecal valve. After separating these adhesions, an inch and a half of the ileum was found to be contracted, knotty to the feel, and to separate the distended from the collapsed portion of the bowel. On further investigation this hard-like mass was found to occlude the lumen of the gut, as no fecal matter nor gas could be forced from the distended into the collapsed portion of the gut. This sclerosed and hardened mass felt and looked very much like a malignant growth. It took so long to separate the adhesions mentioned above, and the patient's condition, prior to the operation, was so weak that just when I was about to begin an enterectomy, the anesthetist said, "Hurry, the patient is in collapse." I then decided not to risk an enterectomy to remove the stenosed part, but simply to sew the ileum to the abdominal wound. This was done hurriedly. Patient revived, and on the next day the intestine was opened, and an artificial anus established. Patient did well, and after moving his bowels in this manner for seven weeks, he was very anxious to have a second operation to close the artificial anus, and to complete what was attempted at the first operation. Second operation was as follows: After cleansing the former wound as well as possible by modern antisepsis, the opening in the ileum was closed by a sponge, and after a very slow and tedious dissection eight inches of ileum were removed, and the two remaining ends were united by a "Murphy button." The toilet of the peritoneal cavity was accomplished by means of mops on forceps. I did not think it advisable to employ irrigation, as by this means septic peritonitis would be more liable to be set up. He rallied from the shock of the operation, and his temperature never went above 99.2. Bowels moved on the third day without the aid of aperients or enemata. Button was never found. He was given strychnine $\frac{1}{30}$ gr. hypodermically, and nothing more. In four weeks after the operation he sat up; and in two weeks more he left the hospital very much improved in health.

What I wish to deduce from these three cases is simply this. In severe cases of intestinal obstruction do not lose much time in giving physic, or trying to remove the obstruction by air or water, but resort to the knife, and do a laparotomy as soon as possible. I may here venture to say that if all practitioners would follow this method of treatment there would be fewer deaths from intestinal obstruction.

In closing, I must state that Dr. Backus, M.R.C.S., of Chatham, ably assisted me in these three abdominal sections.

THE FEAR OF DEATH.

BY DAVID C. WILSON, M.D., PARKHILL.

There are some subjects of vital interest to us that do not come in for a very wide discussion by the laity, possibly from a natural desire to avoid the morbid, or for fear of coming in conflict with the prejudices of our fellows.

I do not wish to discuss the mental state preceding death from a religious or sectarian standpoint, but merely as a mental phase which presents itself for our observation. To the average human, the fear of death is as the sword of Damocles. It is as much a part of our being as any of the natural senses. Though at times the moment of our dissolution seems far distant, a sickness, a danger, and the inevitable fear is upon us. This is brought home to us day after day. It crops up in conversation, we meet it in practice, we see it in the papers. It stares us in the face from the pulpit on the Sabbath day. The very law of the land serves to propagate this feeling, when it teaches that "death" is the extreme penalty, the greatest infliction, the acme of all the punishments that can be brought into use. The prime factors in the cause of this almost universal dread of dissolution seem to be two in number. It is, first, the result of our education and environment; and second, our superstition, a trait inherent in our natures which has been fostered in our early years.

First impressions seem to outlast all others. We see this illustrated in the old man, who clearly remembers the teachings of his youth. He will tell you of the old log school-house on the hill, and of how he and Silas Jones burned the teacher's rod, some seventy years ago; but ask him of the events of a few months ago, of the theories he mastered in later years, and the difference between the impressions of youth and those of later life will in many cases be clearly demonstrated. The average child is taught from early infancy of his or her ulti-

mate end. The good child is told of the glories of heaven, and the golden streets; while the disobedient infant is awed by stories of a dark and dismal world of pain and suffering, where the "devil" reigns supreme. No wonder when the years roll on, and the prospect of death draws nigh, from out the clouds of doubt and mystery shapes the terrifying vision of his early years. Ask the school child of to-day what will happen him hereafter if he is not good, and then almost invariably you will hear from his childish lips the story of a future land of misery and woe.

Another thing that seems to increase the aversion to our dissolution is the conventional funeral of the day, where a morbidly curious public are from time to time regaled by a panoply of horrors, and the survivors are entertained by long dissertations as to their approaching end. Again, no wonder a sickening fear takes possession of the sensitive person, when he pictures himself the centre of a similar exhibition. One reason why death on the field of battle is infinitely better than death in bed is that the victim's feelings are spared. Before death he does not have to lie and gaze into the blackness of an unknown world, lit only by the lurid flashes which superstition gives him, or listen to speculations as to how he shall spend eternity.

The human mind seems to be peculiarly affected by the unknown, with that which it cannot grasp, or which lies beyond its limitations. The child is terrified at the mere thought of entering a dark room or gloomy passage, so in like manner with all mankind, although the educated mind is, in a degree, better able to resist the spell. The ignorant man would sooner face a fierce tiger, empty handed, than brave the sombre solitude of the midnight churchyard. It is the strange, weird sound from the darkness that strikes terror to the stoutest heart, and it is this element of the incomprehensible that seems to be the active principle in our fear of what is ultimately to come. Thus with regard to the angel of death, we look through the long vista of the years, and see its dim shape hovering over our journey's end, our fears have been awakened by the teachings of other days, and the prevailing sentiment—the vision of hearse and coffin, of tears and lamentations, of the conventional warning to the ones that are left—recurs to our mind. This is what constitutes the agony of death, although, as a matter of fact, only one in ten is conscious till the end. The misery is mental, and largely the fault of our progenitors. We are the victims both of superstition and misapplied attempts at education. Two classes seem to be to a great extent free from the troubled mental state that precedes dissolution in the average individual. These

are the religious devotee, who implicitly believes the doctrines of his peculiar creed or faith, who is absolutely sure of his hereafter; and the man of science, who rises far above doctrines or creeds, viewing the case from the standpoint to which original research and scientific labor has brought him, as some would say, the highest type of a reasoning, thinking intelligence.

The former, like the followers of Mahomet, who eagerly died behind the guns at Alexandria, view death as but the entrance to a state of felicity, hence for him the inevitable dissolution has lost its terrors. The scientist, on the other hand, may reject totally the dogmas of his sectarian brother. He views the human body as a physiological mechanism, actuated by that mysterious principle we call life. He is intimately acquainted with the theory of the development of the various structures that form its component parts. He is familiar with the phenomena of both molecular and somatic death, and for him dissolution comes as the solution of the one great mystery. He awaits its coming calmly and serenely, knowing he is on the borderland of a dreamless sleep, or a discovery compared with which the knowledge of the constellations is as nothing. The average individual, however, lacks the implicit faith of the religious devotee, while he cannot reach the height of the scientific intellect, hence it is for him, as it were, to bear the heat and burden of the day, and face in later years the agony of death. When we have conquered the monster of fear, it will be a victory as great as any in the annals of medicine or surgery, a boon to our race greater by far than can be supplied from the realm of physic. Mayhap the time may come when we shall sit down with Calvin and Knox, Huxley and Tyndall, with scientist and divine, and discuss the eternal mysteries of life and death, after it has been our turn to take passage with grim old Father Charon in his row-boat on the Styx.

Selected Articles.

DETAILS OF PRESIDENT McKINLEY'S CASE.

NARRATED BY THE RECORDER AT THE OPERATION.

By NELSON W. WILSON, M.D., Buffalo, N.Y.

Sanitary Officer, Pan-American Exposition.

William McKinley, President of the United States, was shot while holding a public reception in the Temple of Music, at the Pan-American Exposition on Friday, September 6th, 1901, at seven minutes after four o'clock.

For full seven days the President lingered, dying at fifteen minutes after two o'clock on the morning of Saturday, September 14th, at the residence of Mr. John G. Milburn, to which he had been removed the day of the shooting.

When he was shot the President did not lose consciousness; he saw the crowd fling itself upon his assailant and bear him to the floor; he heard the angry cries for vengeance and stretched forth his hand as if in benediction and said: "Let no one harm him."

The ambulance clanged its way through the densely packed crowd and the stricken President was lifted from the chair into which he had sunk and was placed on the stretcher. This was lifted into place and the ambulance, surrounded by soldiers and police, whirled away to the hospital. Inside the vehicle lay the Chief Magistrate of the United States, carefully attended by Dr. G. McK. Hall and Mr. E. C. Mann, the latter a senior medical student on the staff of the medical department of the Pan-American Hospital.

AT THE HOSPITAL.

Arriving at the hospital the President was taken to the operating room and placed on the table. The doctors of the staff undressed him and ministered to his personal comfort. A hypodermic of morphine was given, and almost immediately the telephones began their jingling cry for help.

Dr. Roswell Park, medical director of the exposition, had gone to Niagara Falls to perform an operation. An effort was made to secure the services of Dr. Edward J. Meyer. He, too, was absent from the city. In the meantime Dr. M. D. Mann and Dr. John Parmenter had been sent for and found. Dr. Herman Mynter also was reached, and in a very short time word came that Dr. Park had been communicated with, and was on his way from the Falls in a special train.

Dr. Lee, of St. Louis, who was on the grounds at the time of the shooting, appeared early and voluntarily assumed charge of the medical department. He was relieved almost immediately by the resident staff. Miss A. M. Walters, superintendent of nurses, displayed excellent judgment in the disposition of the nurses and in the preparations for an operation. Instruments were sterilized and dressings prepared, and when at ten minutes after five Dr. Mann arrived, and with Drs. Mynter and Eugene Wasdin, surgeon of the Marine Hospital Service of the United States, who had reached the hospital a few minutes before, made an examination of the President and decided upon operation, he found everything ready for him. Dr. John Parmenter arrived five minutes later than Dr. Mann and went into consultation with the others.

A careful examination of the wounds showed that the first shot had struck near the middle of the sternum producing simply an abrasion. The second had penetrated the abdomen and was serious. The President's condition was one of shock. Mr. Milburn, and the President's secretary, Mr. George B. Cortelyou, with Mr. John N. Scatcherd were called in and informed that immediate operation was a necessity. They told Dr. Mann to do as his wisdom dictated, and when the President was informed that an operation was imperative, he said simply: "Gentlemen, I am in your hands."

THE OPERATION.

When the decision to operate immediately had been reached, Dr. Mann assigned their parts to his assistants. He requested Dr. Wasdin to administer the anesthetic, which was begun at twenty minutes after five o'clock, ether being used. Dr. Mynter stood opposite the operator with the Dr. Lee mentioned above; beside Dr. Mann stood Dr. Parmenter as adviser. Dr. Wilson was assigned to take the records of the operation and time. Mr. Simpson was at the instrument tray; Mr. Mann at the sutures; Miss Catherine Simmons, of Roosevelt Hospital, New York, assisted the anesthetist; Miss M. C. Morris and Miss A. D. Barnes, of St. Luke's, New York, were the sterile nurses; Miss Rose Barron, of the Long Island College Hospital, Brooklyn; Miss Mary A. Shannon, of the Cincinnati General Hospital, and Miss L. E. Dorchester, of the Buffalo General Hospital, were detailed as general assistants. Dr. Hall assisted Dr. Zittell in the general care of the hospital during the operation.

In nine minutes the President was under the effects of the anesthetic, and Dr. Mann after preparing the abdomen made a three inch incision, extending through the bullet hole. There was a deep layer of fat which necessitated the lengthening of

the incision an inch, when the peritoneum was reached. At the bottom of the incision and in the bullet wound was found a small circular bit of cloth, probably undershirt, which had been carried in by the bullet. On opening the peritoneum the intestines were examined and found to be uninjured. On examination of the stomach a bullet wound was found in its anterior wall. The stomach was drawn up and the wound sutured by a double row of silk sutures. Some stomach contents, which had escaped from the wounds, were wiped away.

The original incision was lengthened two inches so that the posterior wall of the stomach could be examined, and here another bullet wound was found, which was similarly sutured.

In the meantime Dr. Rixey, the President's physician, had arrived from the Milburn house where he had been in attendance on Mrs. McKinley.

A search was made for the bullet but it could not be found, and as it was in all probability lodged in the deep lumbar muscles it was decided not to make any effort to remove it.

Dr. Park was in the midst of an operation at Niagara Falls when he was notified of the shooting. Rapidly he completed his work and reached the hospital in two hours after the President had received his wound.

When he entered the operating room he asked what had been done and what had been found, and Dr. Mann told him. The operation was all but completed. All that remained was to flush out the abdominal cavity with salt solution and sew up the abdominal wound. This was done, the abdomen being closed without drainage. At ten minutes of seven the anesthetic was stopped and bandages applied. At this time the pulse was 122 and the respiration 32. The President during the operation had been given gr. 1-30 of strychnine and 25 min. of brandy hypodermatically. It was decided after consultation to remove the patient to the residence of Mr. John G. Milburn, and a full equipment consisting of bed, bedding and sick-room appliances was sent to the house in charge of Miss Simmons and Miss Barnes, who were to take care of the President during the first night. He was placed in the ambulance, and in charge of Dr. Park and Dr. Wasdin was moved to his destination.

ANXIETY AND HOPE.

Then came the anxious period of waiting. Bulletins were issued by the President's physicians at frequent intervals. There appeared to be no danger until Thursday night. Dr. McBurney, of New York, had arrived on Sunday, and expressed the opinion that the patient would be at his desk in Washington within six weeks. Throughout the land there swelled a feeling of intense relief and gratitude that the life of this good

man was to be spared. The surgeons came and went with light steps; they smiled with the confidence the conditions seemed to warrant. Thursday noon, Dr. McBurney went away. The bulletins said the President had had a piece of toast—some solid food—and that he was on the high road to recovery.

FEAR AND DESPAIR.

Soon after, late in the afternoon of Thursday, there was a change. An hour later was the beginning of the end.

The President is not so well; then, the President is worse. The President's heart is weak. There has been a collapse. Dr. Charles G. Stockton has been called in consultation. There is grave danger. Strong heart stimulants are being administered.

The President does not respond to the stimulants. Unless there is a change soon he cannot live. The doctors have not given up all hope, but there is grave danger. The President has rallied somewhat, but is very weak. The President has suffered another attack of heart failure. The doctors are administering oxygen. The President is dying. The doctors have given up all hope and have stopped the oxygen. And to the four corners of the world flashed the final bulletin: "The President died at 2.15."

THE OFFICIAL BULLETINS.

The official story of the President's case is told in the following bulletins. The men signing them were Dr. P. M. Rixey, the President's physician; Dr. M. D. Mann, Dr. Roswell Park, Dr. Herman Mynter, Dr. Eugene Wasdin, Dr. Charles McBurney, Dr. Charles G. Stockton and Mr. George B. Cortelyou, Secretary to the President.

First Day: Friday, September 6th, 7 p.m.—The President was shot about 4 p.m. One bullet struck him in the upper portion of the breast bone, glancing and not penetrating. The second bullet penetrated the abdomen five inches below the left nipple and one and one-half inches to the left of the median line. The abdomen was opened through the line of the bullet wound. It was found that the bullet had penetrated the stomach. The opening in the front wall of the stomach was carefully closed with silk stitches, after which a search was made for a hole in the back wall of the stomach. This was found and also closed in the same way. The further course of the bullet could not be discovered although careful search was made. The abdominal wound was closed without drainage. No injury to the intestines or other abdominal organ was discovered. The patient stood the operation well. Pulse of good

quality, rate of 130. Condition at the conclusion of the operation was gratifying. The result cannot be foretold. His condition at present justifies hope of recovery.

10.40 p.m.—The President is rallying satisfactorily and is resting comfortably. Temperature, 100.4° ; pulse, 124; respiration, 24.

Second Day: Saturday, September 7th, 9 a.m.—The President passed a fairly comfortable night and no serious symptoms have developed. Pulse, 146; temperature, 102° ; respiration, 24.

8.30 p.m.—The President continues to rest quietly; no change for the worse. Pulse, 140; temperature, 102.2° ; respiration, 24.

9.30 p.m.—Conditions continue much the same. The President responds well to medicine. Pulse, 132; temperature, 102.5° ; respiration, 25. All temperatures reported are taken in the rectum.

Third Day: Sunday, September 8th, 9 a.m.—The President passed a good night and his condition this morning is quite encouraging. His mind is clear and he is resting well; wound dressed at 8.30 and found in a very satisfactory condition. There is no indication of peritonitis. Pulse, 132; temperature, 102.8° ; respiration, 24. Rixey, Mann, Park, Mynter, Wasdin, Cortelyou.

9 p.m.—The President is resting comfortably. Pulse, 130; temperature, 101.6° ; respiration, 30.

Fourth Day: Monday, September 9th, 9.20 a.m.—The President's condition is becoming more and more satisfactory. Untoward incidents are less likely to occur. Pulse, 122; temperature, 100.8° ; respiration, 28.

9.30 p.m.—The President's condition continues favorable. Pulse, 112; temperature, 101° ; respiration, 27.

Fifth Day: Tuesday, September 10th, 9 a.m.—The President's condition this morning is eminently satisfactory to his physicians. If no complications arise a rapid convalescence may be expected. Pulse, 104; temperature, 99.8° ; respiration, 26.

10.30 p.m.—The condition of the President is unchanged in all important particulars. His temperature is 100.6° ; pulse, 114; respiration, 28. When the operation was done on Friday last it was noted that the bullet had carried with it a short distance beneath the skin a fragment of the President's coat. This foreign material was, of course, removed, but a slight irritation of the tissues was produced, the evidence of which appeared only to-night. It has been necessary on account of this slight disturbance to remove a few stitches and partially open the skin wound. This incident cannot give rise to other

complications, but it is communicated to the public, as the surgeons in attendance wish to make their bulletins entirely frank. In consequence of this separation of the edges of the surface wound the healing of the same will be somewhat delayed. The President is now well enough to begin to take nourishment by the mouth in the form of pure beef juice.

Sixth Day: Wednesday, September 11th, 9 a.m.—The President rested comfortably during the night. Decided benefit has followed the dressing of the wound made last night. His stomach tolerated the beef juice well, and it is taken with great satisfaction. His condition this morning is excellent. Pulse, 116; temperature, 100.2°.

10 p.m.—The President's condition continues favorable. Blood count corroborates clinical evidence of the absence of blood poisoning. He is able to take more nourishment and relish it. Pulse, 120; temperature, 100.4°.

Seventh Day: Thursday, September 12th, 9.30 a.m.—The President has spent a quiet and restful night, and has taken much nourishment. He feels better this morning than at any time. He has taken a little solid food this morning and relished it. Pulse, 120; temperature, 100.2°.

8.30 p.m.—The President's condition this evening is not quite so good. His food has not agreed with him and has been stopped. Excretion has not yet been properly established. The kidneys are acting well. His pulse is not satisfactory, but has improved in the last two hours. The wound is doing well. He is resting quietly. Temperature, 100.2°; pulse, 128.

12 M.—All unfavorable symptoms in the President's condition have improved since the last bulletin. Pulse, 120; temperature, 100.2°.

Eighth Day: Friday, September 13th, 2.50 a.m.—The President's condition is very serious and gives rise to the gravest apprehension. His bowels have moved well, but his heart does not respond properly to stimulation. He is conscious. The skin is warm, and the pulse small, regular, easily compressible, 126; respiration, 30; temperature, 100°.

9 a.m.—The President's condition has somewhat improved during the past few hours. There is a better response to stimulation. He is conscious and free from pain. Pulse, 128; temperature, 99.8°.

5.35 p.m.—The President's physicians report that his condition is grave at this hour. He is suffering from extreme prostration. Oxygen is being given. He responds to stimulation but poorly. Pulse, 125; respiration, 40.

9.30 p.m.—The President is dying.

Ninth Day: Saturday, September 14th, 2.15 a.m.—The President is dead.

THE AUTOPSY REPORT.

The autopsy was performed by Dr. H. R. Gaylord and Dr. H. G. Matzinger, of the Buffalo State Pathological Laboratory, on Saturday, the day of death. It was apparently an exhaustive examination occupying several hours. The official report is as follows :

The bullet which struck over the breast bone did not pass through the skin and did little harm.

The other bullet passed through both walls of the stomach near its lower border. Both holes were found to be perfectly closed by the stitches, but the tissue around each hole had become gangrenous. After passing through the stomach the bullet passed into the back walls of the abdomen hitting and tearing the upper end of the kidney. This portion of the bullet track was also gangrenous, the gangrene involving the pancreas. The bullet has not yet been found. There was no sign of peritonitis or disease of other organs. The heart walls were very thin. There was no evidence of any attempt at repair on the part of nature and death resulted from the gangrene which affected the stomach around the bullet wounds as well as the tissues around the further course of the bullet. Death was unavoidable by any surgical or medical treatment, and was the direct result of the bullet wound.

Signed: Harvey R. Gaylord, Herman G. Matzinger, P. M. Rixey, Matthew D. Mann, Herman Mynter, Roswell Park, Eugene Wasdin, Charles G. Stockton, Edward G. Janeway, W. W. Johnston, W. P. Kendall, Surgeon U. S. Army; Charles Cary, Edward L. Munson, Assistant Surgeon U. S. Army, and Hermanus L. Baer.—Synopsis, *Buffalo Medical Journal*.

REMARKS ON THE OPERATION BY MATTHEW D. MANN, M.D.

The difficulties of the operation were very great, owing partly to the want of retractors and to the failing light. The setting sun shone directly into the room, but not into the wound. The windows were low and covered with awnings. After Dr. Rixey aided us with a hand mirror, the light was better. Toward the end of the time a movable electric light with reflector was put in use. The greatest difficulty was the great size of President McKinley's abdomen and the amount of fat present. This necessitated working at the bottom of a deep hole, especially when suturing the posterior wall of the stomach.

The operation was rendered possible and greatly facilitated by a good operating table and the other appliances of a hospital, and by the presence of many nurses and assistants. Still, the hospital was only equipped for minor emergency work, and had but a moderate supply of instruments. Unfortunately, when

called I was not told what I was wanted for, and went to the Exposition grounds entirely unprepared. Dr. Mynter had his large pocket case, the contents of which were of great use.

As has already been noted, further search for the bullet was rendered inadvisable by the President's condition. The autopsy shows that it could not have been found, and that the injuries inflicted by the bullet after it passed through the stomach were of such a nature as to render impossible and unnecessary any further surgical procedure. A bullet after it ceases to move does little harm. We were often asked why, after the operation, we did not use the *x*-ray to find the bullet. There were several reasons for this. In the first place, there were at no time any signs that the bullet was doing harm. To have used the *x*-ray simply to have satisfied our curiosity would not have been warrantable, as it would have greatly disturbed and annoyed the patient, and would have subjected him also to a certain risk. Had there been signs of abscess-formation, then the rays could and would have been used.

My reason for not draining was that there was nothing to drain. There had been no bleeding or oozing; there was nothing to make any discharge or secretion; the parts were presumably free from infection, and were carefully washed with salt solution. As there was no peritonitis and the abdomen was found *post-mortem* to be sterile, we may safely conclude that no drainage could have been provided which would have accomplished anything. My experience teaches me never to drain unless there is a very decided indication for it, as a drain may do harm as well as good.

In conclusion, I wish to thank all the gentlemen who so kindly and skilfully assisted me. They were all surgeons of large experience in abdominal surgery, and their aid and advice were most valuable. Especially I wish to acknowledge my great obligation to my associate, Dr. Mynter. Not only was he an assistant, but he was much more, and helped me greatly by his skill and, as a consultant, with his good judgment and extensive knowledge of abdominal work. Although called first, he waived his claim, and generously placed the case in my hands, willingly assuming his share of the responsibility.

The anesthetic was most carefully administered by Dr. Wasdin, and the knowledge that he had charge of this very important duty relieved me of any anxiety on that score.

In the eventful week that followed the operation, Dr. Park and Dr. McBurney were towers of strength in helping to decide the many difficult questions which came up.

Dr. Rixey was in constant charge of the sick-room, aided later by Dr. Wasdin, who was detailed for this special duty. Both were unremitting in their care, and faithful to the end.

Dr. Stockton helped us in the last three days with the highest skill and best judgment.'

Never, I am sure, under like circumstances, was there a more harmonious or better agreed band of consultants. That our best endeavors failed was, I believe, no fault of ours; but it must be an ever-living and keen regret to each of us, that we were not allowed the privilege of saving so noble a man, so attractive a patient, and so useful a life.—*Jour. A. M. A.*

The autopsy was performed by Dr. H. R. Gaylord, pathologist to the New York State Pathological Laboratory, assisted by Dr. Matzinger. Dr. Gaylord concludes his report as follows:

In summing up the macroscopic and microscopic findings of the autopsy, the following may be stated: The original injuries to the stomach-wall had been repaired by suture, and this repair seems to have been effective. The stitches were in place, and the openings in the stomach-wall effectually closed. Firm adhesions were formed both upon the anterior and posterior walls of the stomach, which reinforced these sutures. The necroses surrounding the wounds in the stomach do not seem to be the result of any well-defined cause. It is highly probable that they were practically terminal in their nature, and that the condition developed as a result of lowered vitality. In this connection there is no evidence to indicate that the removal of the omentum from the greater curvature and the close proximity of both of these wounds to this point, had any effect in bringing about the necrosis of the gastric wall, although circulatory disturbances may have been a factor. The fact that the necrotic tissue had not been affected by digestion strongly indicates that the necrosis was developed but shortly before death. The excavation in the fat behind the stomach must be largely attributed to the action of the missile. This may have been the result of unusual rotation of a nearly spent ball, or the result of simple concussion from the ball passing into a mass of soft tissues. Such effects are not unknown. The fact that the ball grazed the superior aspect of the left kidney, shown by the microscopic investigation of that organ, indicates the direction of the missile, which passed in a line from the inferior border of the stomach to the tract in the fat immediately superior to the kidney. There was evidence that the left adrenal gland was injured.

The injury to the pancreas must be attributed to indirect, rather than direct, action of the missile. The fact that the wall of the cavity is lined by fibrin, well advanced in organization, indicates that injury to the tissues was produced at time of shooting. The absence of bacteria from the tissues indicates that the wound was not infected at the time of the shooting, and that the closure of the posterior gastric wound was effec-

tual. The necrosis of the pancreas seems to us of great importance. The fact that there were no fat necroses in the neighborhood of this organ, indicates that there was no leakage of pancreatic fluid into the surrounding tissues. It is possible that there was a leakage of pancreatic fluid into the cavity behind the stomach, as the contents of this cavity consisted of a thick, grayish fluid, containing fragments of connective tissue. In this case the wall of fibrin would have been sufficient to prevent the pancreatic fluid from coming in contact with the adjacent fat. The extensive necrosis of the pancreas would seem to be an important factor in the cause of death, although it has never been definitely shown how much destruction of this organ is necessary to produce death. There are experiments upon animals on record, in which the animals seem to have died as a result of not very extensive lesions of this organ. One experiment of this nature reported by Flexner (*Journal of Experimental Medicine*, Vol. II.) is of interest. The fact that concussion and slight injuries of the pancreas may be a factor in the development of necrosis, is indicated by the researches of Chiari (*Zeitschrift für Heilkunde*, Vol. XVII, 1896, and *Prager medicinische Wochenschrift*, 1900, No. 14), who has observed (although a comparatively rare condition) extensive areas of softening and necrosis of the pancreas, especially of the posterior central portion which lies directly over the bodies of the vertebra, where the organ is most exposed to pressure or the effects of concussion. The wound in the kidney is of slight importance, except as indicating the direction taken by the missile. The changes in the heart, as shown by the macroscopic inspection and the microscopic examination, indicate that the condition of this organ was an important factor. The extensive brown atrophy and diffuse fatty degeneration of the muscle, but especially the extent to which the pericardial fat had invaded the atrophic muscle fibres of the right ventricular wall, sufficiently explain the rapid pulse and lack of response of this organ to stimulation during life.—*N. Y. Med. Jour.*

THE CELEBRATION OF RUDOLPH VIRCHOW'S EIGHTIETH BIRTHDAY.

THE ORDER OF THE CEREMONIES.

The great day of the Virchow celebration has come and gone. Never yet has homage so wide, so general, and so deeply felt been paid to any private individual before. And this too: In that illustrious assemblage, no personality was more interesting, more characteristic than the unbent, spare and wiry little figure of the octogenarian, with his keen but passionate face, his level voice and sober demeanor, as he stood for hours in his Pathological Museum, again for hours at night in the Abgeordneten-haus, without a trace of excitement or fatigue, up to the very last moment.

VIRCHOW'S ADDRESS.

On October 12th the official proceedings began at 11.30 in the Pathological Museum. Dr. Studt made a speech, presenting a marble bust of Virchow, which is to remain in the museum. Then a move was made to the Lecture Hall. Needless to say, that a tremendous reception was accorded to Virchow as he stepped up to his laurel-wreathed lecturer's desk. He began by words of thanks and welcome, and then led up to the subject of his address: The History of Pathology. For more than an hour he spoke, touching upon malformations, upon trichiosis, tuberculosis, and upon the enlightenment to be gained on all these subjects by the collections of the Pathological Museum.

A stand-up lunch and inspection of the treasures of the five-storeyed museum under Virchow's leadership closed the morning's proceedings at about half-past three. It may be interesting to note here that no fewer than 20,883 objects are arranged on view in the museum, while upwards of 2,000 more have still to be placed there.

THE BANQUET.

At half-past six a "small and intimate" banquet of 220 covers united the Virchow family with the foreign delegates and chief personages of the Virchow celebration. Lord Lister and Bacelli, the Italian pathologist and Cabinet Minister, were perhaps the most remarked among the guests.

ADDRESSES OF DELEGATES.

Meantime the guests, who were to witness the great official function of the evening, had assembled in the Parliament Hall, the ladies in the galleries and boxes above. The banqueters from the dining hall slipped in in groups and took their places, and at a quarter to nine a flourish of trumpets announced and welcomed the entrance of Virchow. And then began a series of addresses and presentations from all quarters of the globe, the mere enumeration of which would fill pages—in truth, a grand and universal homage to intellectual achievement! As the hours passed, medals, pictures, caskets, and rolls of addresses accumulated on the chairs and tables around Virchow, until at last he stood—for he stood through it all, the wonderful youth of 80!—fairly surrounded by them.

Professor Waldeyer gave the opening address.

The Cultus-Minister Studt read aloud a letter from the German Emperor, words of congratulation and grateful appreciation of Virchow's great lifework, with the bestowal of the Great Gold Medal for Science.

A congratulatory telegram from the Imperial Chancellor, Count von Bülow, was also read.

Loud applause greeted Bacelli, who in the name of the Italian Government presented a picture (the heads of Morgagni and Virchow side by side, with the hexameter motto, "*Ut quos corda foveat presentes lumina spectent*"), and read a beautiful and enthusiastic address written in Latin.

Dr. Langerhaus, President of the Town Council, read an address full of gratitude for Virchow's labors for the weal of the city of Berlin.

Professor Cornil, the French delegate, was much applauded.

Enthusiastic calls greeted Lord Lister, who said: Reverend master, I am here as a delegate of the Royal Society of London, of which you are an honored member, and on behalf of which I have to present to you a loyal address. I have been also requested to hand you addresses from six other societies which greatly regret that it has been impossible for them to send special delegates. They are as follows: (1) The Anthropological Section of the British Association, for the Advancement of Science; (2) The University of London; (3) the University of Edinburgh; (4) the Faculty of Physicians and Surgeons of Glasgow; (5) the Medico-Chirurgical Society of Edinburgh; (6) the Royal Academy of Medicine in Ireland. All these bodies join in recognition of your gigantic intellectual powers, in gratitude for the great benefits that you have conferred upon humanity, and in admiration of your personal character,

your absolute uprightness, the courage which has enabled you always to advocate what you believed to be the cause of truth, liberty, and justice, and the genial nature which has won for you the love of all who know you. The astonishing vigor which you displayed in the address to which we listened to-day justifies the hope that, when many of us your juniors shall have been removed from this scene of labor, it may be granted to you to celebrate your 90th birthday not only in health and honor, but in continued activity in the service of mankind."

A graceful and modest speech was Sir Felix Semon's, who said that he had been selected to convey the sincere congratulations of the Royal College of Physicians of London first because the College considered that it would be agreeable to Virchow to receive its good wishes from the mouth of an old and faithful pupil, and secondly because by selecting a native of Germany the College wished to emphasize the old scientific brotherhood which had so long united German and British science, and to express its sincere gratitude for the beneficial influence that Virchow had exercised no less upon English than upon German science.

It was long past midnight when Virchow's former and present assistants, headed by Professors Liebreich (Berlin) and von Recklinghausen (Strassburg) came up at last to offer their homage and congratulations.

THE VIRCHOW KRANKENHAUS IN BERLIN.

The new Berlin Municipal Hospital, which is to bear the name "Virchow Krankenhaus," when completed will be by far the finest hospital in Berlin, nay, probably there will be few to rival it anywhere in the world.

THE SITE AND GENERAL PLAN.

An enormous plot of ground of irregular shape has been most sagaciously planned and laid out; the hospital pavilions have been kept as much as possible in the centre, away from street noises, whilst the administration, the stables, machine houses, store houses, etc., in fact all departments communicating with the outer world, are so arranged that they can be entered and left without approach to the hospital proper. The æsthetic effect, too, is most happy. Sixty-two buildings cover the ground without being crowded, and at every turn the eye finds garden parterres, shrubberies, and trees to rest on.

MEDICAL STAFF.

The medical staff is entirely resident, and comprises four directors, that is, the Chief Physician, the Chief Surgeon, the Chief Gynecologist, and the Chief Administrator. Each large pavilion has its own head medical officer and "Volontär-arzt" (unpaid assistant medical officer). The hospital is arranged for 1,650 patients, but can contain 1,900 at time of pressure. The staff numbers 550 in all, but room is provided for 600 if necessary. The nurse-training institute is planned for 75 pupils.

LABORATORIES, ETC.

There are separate anatomical, histological, and bacteriological laboratories, and each infectious and veneered pavilion is furnished with a laboratory of its own. The extent to which the hospital is to be used for clinical investigation and the instruction of students has not been finally decided yet, but it is settled that the infectious departments are to furnish investigation material for the Koch Institute for Infectious Diseases, which is situated near by.—*Abstract, Brit. Med. Jour.*

Society Reports.

TORONTO CLINICAL SOCIETY.

The first regular meeting of this Society for the session of 1901-1902 was held in St. George's Hall, Elm Street, on the evening of the 2nd of October.

Dr. J. F. W. Ross, the President, occupied the chair.

The following Fellows were present: Pepler, Elliott, Small, McIlwraith, Orr, Lehman, Anderson, McCallum, Bruce, MacDonald, Grassett, Greig, Silverthorn, Oldright, Ryerson, Aikins, Parsons, Thistle, Trow and Baines.

Specimen of Hairy Tumor Removed from the Stomach.—By DR. HERBERT A. BRUCE.

A report of this has already been published in the medical journals.

DISCUSSION.

Dr. Oldright asked Dr. Bruce why he gave milk every hour after the operation.

Dr. Thistle asked about the condition of the stomach, whether there were any gastric symptoms, from the presence of the tumor in the stomach.

Dr. Anderson asked what information one might have got had an analysis of the stomach contents been made.

The President stated he had seen the patient in consultation with Dr. Bruce, and he had never made a more careful examination of a patient in his life, and the surprise was that they did not discover that the tumor was in the stomach. The idea was that the tumor must be the spleen, though the splenic enlargement did not fit in with the condition, and then it would be impossible for a woman with such a large spleen to be in such a healthy condition. He doubted if any hair would have come up had an examination of the stomach contents been made.

Dr. Lehman asked Dr. Bruce to explain what caused the small gray spot on the tumor.

Dr. Bruce in reply: Dr. W. H. B. Aikins asked when solid food was first given after the operation. She had milk forty-eight hours after the operation. The first solid food was given in about ten days; fish and chicken in about two weeks. Answering Dr. Oldright's question, Dr. Bruce stated that he had frequently found that the administration of milk in that

way agreed with the patient very much better than when a larger quantity was given at a longer interval. Reply to the questions of Dr. Greig and Thistle, there were none whatever pointing to the stomach. Patient had a splendid appetite and took her nourishment well and was always hungry. Dr. Anderson had examined the blood for leukæmia going on the possibility of splenic enlargement. He did not think that a stomach examination in the usual way would have helped in the diagnosis. As to the grey spot, it was thought to be due to pressure.

(a) Cystic Tumor in Popliteal Space—(b) A Case of Polymastia.

Two patients were presented by Dr. A. A. Small, which proved of considerable interest. The first occurred in a woman of about forty years of age and was situated about the lower part of the popliteal space of the left leg.

Dr. Grasett considered that it was an interesting tumor. It seemed to be cystic and was perhaps connected with a bursa or was growing from a tendon sheath.

Dr. W. H. B. Aikins had seen the patient about a month ago at the city dispensary and had diagnosed a popliteal bursa. He referred to a similar case he had seen in London in '81.

The tumor in the second case was situated on the back of a woman of fifty-five or sixty years. It was near the posterior border of the right axilla, was about three or four inches in diameter and had a smaller nipple-like tumor at its centre.

Dr. McIlwraith, who had examined the tumor closely, stated there were no evidences of any milk ducts opening on the surface at all; and on pressing the tumor one does not feel any divisions. He had ascertained that it had developed only within the last four or five years, and practically after the woman has passed the child-bearing period of life.

Developing after that time of life, would seem to be a very unusual thing. He thought it might probably be a lipoma rather than a supernumerary gland.

Dr. Silverthorn agreed with Dr. McIlwraith, and stated that the tumor seemed to be distinctly capsulated. Occurring in a woman of sixty years of age who had borne children, and development coming on only within the last few years, and previous to that no sign of activity of the so called supernumerary breast, negatives the diagnosis of polymastia, and then, the smaller tumor does not seem to be a real nipple at all.

Speaking of the first case, Dr. Silverthorn thought the tumor cystic and probably from a bursa.

Dr. Small stated that the nipple has always been present.

Dr. Ross referred to the fact of there being no enlargement during the time the woman was nursing her children; and the

nipple is not characteristic at all. He further referred to a case in Hirst's text-book.

Tumor of Breast.—Specimen and Clinical Notes.

Dr. A. A. Macdonald showed a specimen of a fibro-cystic adenoma. There was one point of interest in connection with the case worth noting. It occurred in a woman of forty-six years who had three or four children. Her mother had died of cancer of the liver, the father being alive and healthy. Eight weeks before removal of the growth she consulted Dr. Macdonald. She came for pain in the breast. On examination the surgeon could find no trace of disease or undue enlargement; he could not tell any difference between the two breasts. Practically normal breast tissue. The pain, however, persisted, but her general health improved a trifle. She again consulted Dr. Macdonald and this time on examination found a circumscribed tumor with a fairly definite outline. An operation was performed three days after this latter consultation and the growth removed. Section showed a cyst with a hard fibrous mass attached. Dr. Macdonald thought it well to cut wide of the tumor and therefore removed the whole breast. The interesting point is its rapid growth. This is usual in cystic tumors of the breast, but not in fibromata. The fibromatous portion of this tumor may have been present at the time of his first examination, but the cystic portion developed subsequently; the presence of pain during the early history of the case is characteristic of benign tumors. Such tumors never invade the surrounding tissues and never recur. Microscopic examination confirmed the diagnosis; and Dr. Macdonald believes removal to be the correct thing.

Dr. H. B. Anderson, in discussing this case, stated that in fibro-cystic adenoma complete removal of the breast is the correct thing.

The discussion was continued by Drs. Oldright, Silverthorn and the President, the latter pointing out that when operating on a galactoceles, do not let the cream run into your wound. If you do, you will have a nasty wound. Another point: incision into these tumors should always be made.

Dr. Macdonald replied, emphasizing this latter point of Dr. Ross.

NOTICE OF MOTION.

Dr. C. Trow, seconded by Dr. W. B. Thistle, that Article X of the By-Laws be amended, to read, that the number of resident Fellows shall not exceed 100.

The meeting then adjourned for refreshments.

GEORGE ELLIOTT,
Recording Secretary.

Progress of Medical Science.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES F. W. ROSS, ALBERT A. MACDONALD,
AND K. C. McILWRAITH.

Facial Presentation.

Ostreil (*Medical Press*, July 24, 1901) gives an analysis of 11,513 cases delivered at the "Hebammen" Clinic of Prague, of which fifty-nine, or 0.5 per cent., were face presentations. Of these fifty-nine, one-third were primiparæ, and two-thirds multiparæ. This position was no more dangerous for the mother than the vertical pole, except that labor was more protracted. Infant mortality is high, being 41.8 per cent. In six cases, or 10 per cent., instruments were used, with two fetal deaths. In one case perforation was performed; twice turned; while nine were improved by Thorn's manual correction.

Ostreil recommends the earliest possible interference to correct the position according to that recommended by Schatz, which may be easily performed if sufficiently early diagnosed and no complications present.

When the head has descended well into the pelvis, and the os fully dilated, chloroform should be given, and Schatz's method tried; failing this, Thorn's method may be undertaken—i.e., pass the hand into the uterus till the occiput is firmly grasped, which is then drawn forward while the face recedes. This operation is assisted by the second hand manipulating the external surface of the abdomen.—*The Medical Age*.

Ophthalmological Aspects of Pregnancy.

Dr. Casey A. Wood, at a meeting of the Chicago Academy of Medicine, declared that pregnant women are liable to suffer from paresis of accommodation; reading, writing, and near work generally, may be difficult, or even impossible for the briefest periods. Muscular insufficiency is also to be observed, the strength of the ocular muscles being less than normal during pregnancy. This weakness of the muscles is not different from weakness observed elsewhere in the body at this period, and is due to the fact that pregnancy alters the nutritive condition of the eye as of other organs. Increase of the apparent refractive error is quite common in pregnancy. Primiparæ not infrequently require the aid of glasses, which can be discarded in many cases after the child is born.

Pigmentation of the eyelids may be seen in pregnancy, and is merely a part of the general pigmentation of the skin so commonly seen in gravid women. Violent and long-continued vomiting may produce small hemorrhages into the subconjunctival tissue. These superficial hemorrhages are not serious, but if hemorrhage occurs into the interior of the eye, damage to the vision is to be expected. Unfortunately, intraocular hemorrhage is a not uncommon result of persistent vomiting, and detachment of the retina has been seen to occur from the same cause.

Retinitis albuminurica frequently accompanies pregnancy, but the disease of the retina shows itself in a more favorable form in pregnancy than it does in the ordinary forms of Bright's disease. The prognosis is not as grave in pregnancy from albuminuric retinitis as it is in chronic Bright's disease, although the conditions are about the same. Occasionally a patient who is pregnant, whether albuminuria be recognized or not, has partial or even complete blindness, which may last from a few hours to a few days. These patients almost invariably get well. Nothing pathological can be seen in the fundus by the ophthalmoscope.—*Medical Review of Reviews*.

Antistreptococcus Serum in Puerperal Fever.

Blumberg (*Berl. klin. Woch.*, Nos. 5 and 6, 1901) has used Marmorek's antistreptococcus serum in twelve cases of puerperal fever in the University Clinic of Leipzig. In general all the cases were severe; cases where there was long-standing fever which showed no tendency to fall. The investigation makes it appear probable that the serum is of value, especially when the puerperal fever is due to a pure infection with streptococcus. In two such cases the patient recovered. The one had had fever for two and a half days up to 40 deg. C. and above; after she had received 20 grams of serum the temperature was normal, and remained so for two days; it then rose again to 40.4 deg. C. in the rectum, but fell again on the further administration of serum, and remained normal thereafter. As complications of the injections, urticaria, erythema and general and local exanthemata were noted. The local eruptions can be avoided if care is taken to inject the serum entirely into the subcutaneous tissue, and not into the skin.—*Epit. B. M. J.*

Gangrene of the Uterus in the Puerperium.

Zaborowski (*Gazeta Lekarska*, Nos. 1 to 3, 1901) has prepared a monograph on this disease, which was first described correctly as "metritis dissecans" by Syromiatuikow in 1881. He collects the reports of forty-one cases published since that date. In his own case the patient was a young primipara.

Six days after delivery fever, rigors and urticaria set in; then abdominal swelling occurred, followed by fetid vaginal discharge. At the end of a month the curette was applied; then a perforation of the posterior wall of the abdomen was detected; the uterus was therefore removed entire, and the patient recovered. It appears that metritis dissecans may have a well defined line of demarcation, or this may be wanting, then the entire inner aspect of the uterus is invaded. Young women are most subject to this affection, especially when affected with serious general disorders, or when labor is lingering, and obstetrical operations are needed. The clinical features are usually just as described in Zaborowski's own case. Rashes are common. In some cases the uterus takes to contract and expel sloughy parts of its mucosa and muscular walls, sometimes the whole mucosa comes away. Abuse of caustics frequently causes this singular complication. The mortality is 32 per cent. Complete cure is rare, the uterus being much damaged. In bad cases hysterectomy alone will save the patient.—*Epit. B. M. J.*

The Value of Veratrum Viride in Puerperal Eclampsia.

The editor of the *Therapeutic Gazette* addressed an inquiry on this subject to some of the leading obstetricians of the United States. The replies of eight of them are published in the August number of that journal. Three of the gentlemen applied to have never had sufficient confidence in the drug to use it, and have, therefore, no experiences to record. The observations of all are of great interest. There is one point that is noted by all who have used the drug, and as this point seems to be the means of determining whether it should be used or not, we subsume their opinions on it.

J. Clifton Edgar, M.D.—With the pulse *strong*, as well as rapid, veratrum viride offers the most certain means at our command for temporarily, or even permanently, controlling the spasms. With a weak pulse morphine hypodermically, inhalations of chloroform, and chloral administered per rectum, together with stimulation, if necessary, may be used instead.

Richard C. Norris, M.D.—When the pulse is feeble and rapid, the patient profoundly toxic and irresponsive to the usual treatment, I have never seen any benefit from veratrum; indeed, such cases require stimulation of the circulation, rather than depression.

Barton Cook Hirst, M.D.—The drug is most valuable in cases with a strong, bounding pulse, with suffused face, and danger of cerebral apoplexy. In an asthenic kind of case, with feeble pulse and pale face, I would not employ it.

Edward P. Davis, M.D.—In cases with full, heavy pulse, and increased pulse tension, it lessens arterial tension, slows the

pulse, diminishes the tendency to convulsions, and promotes the dilatation of the cervix uteri.

The above four gentlemen have used *veratrum viride*, and found it useful.

George M. Boyd, M.D.—If used at all, I believe it is indicated only in the sthenic cases. I have used it to its physiological effect (reducing the pulse rate from 130 to 70), with no improvement in the patient's condition, but, on the contrary, it acted as a powerful depressant.

In the same number of the *Therapeutic Gazette* there is quoted an article by Marx, from which the following remarks are extracted on the subject of *veratrum viride*:

"Unquestionably it will reduce both the volume and rapidity of the pulse; but of what value is such a reduction when it is symptomatic and not curative? The statement has often been made that when under its influence the pulse becomes soft, slow, and compressible, convulsions do not occur. This is emphatically denied, and in unmeasured terms, by the author, since he has seen awful convulsions when the pulse was 60 and alarmingly feeble. In a fatal case, that of the wife of a physician, a convulsion occurred one-half hour after an induced labor. The pulse was full and bounding and 178 to the minute. Hypodermics of full doses of *veratrum viride* sent the pulse down to 50, when it was hardly to be felt, and yet the worst convulsion the patient ever had occurred at this time, and she succumbed to the malady in a short time. And yet in another woman full doses of a reliable preparation were given to control the fits while the pulse was full and bounding and the face deeply cyanotic, and neither the pulse nor the very severe convulsions were controlled. These and other cases, the results in which were entirely unsatisfactory, make one a sceptic as to the real curative value of this drug; and while it is not doubted that physiologically the drug will achieve its end, yet what we are after is not this—a symptomatic cure restricted to one symptom—but a clinical and complete cure."

The doses used vary from 8 to 20 minims of the fluid extract hypodermically, some beginning with 8 minims and repeating 5 minim doses every fifteen or twenty minutes *pro re nata*, and others giving an initial dose of from 10 to 20 minims. The writer of this review has used *veratrum* in only one case—a sthenic one, with full, bounding pulse; 20 minims of the fluid extract (P. D. & Co.) were given hypodermically. The result was immediately and permanently satisfactory. The pulse fell inside of an hour from 150 to 60, the patient became calm and conscious, and perspired profusely. She recovered completely.

K. C. M.

PEDIATRICS.

IN CHARGE OF ALLEN BAINES, W. J. GREIG, AND W. B. THISTLE.

Some Practical Points.

In acute diseases of infants, the chief blood conditions to be watched for are pallor from destruction of red cells, and lividity from insufficient blood aeration. The last symptom shows most plainly about the mouth and nose, and when it is well marked, convulsions are to be feared.

An irregular pulse in infancy, if rapid, has no special significance.

Do not place much reliance on the condition of the tongue in infants or young children. A clean tongue is very often present in chronic cases of indigestion, and death may take place without a coating having ever appeared on the tongue.

Physical signs, especially in children, are not to be considered to the exclusion of the patient.

The French claim that the best treatment of chronic ileocolitis is sodium sulphate, in doses of from 50 to 75 grains to an infant of a year old, daily.

Icterus in Children.

If icterus neonatorum lasts longer than five or six weeks, look for some cause other than simple functional disturbance. The cause of even the ordinary cases is obscure, but may be due to obstruction of the ducts by the very thick bile which is present during the fetal life. Even if the jaundice, lasting as long as five or six weeks, does disappear, care should be exercised in giving a prognosis as to the future.

The conditions to be excluded are cirrhosis, syphilitic hepatitis or congenital obliteration of the ducts. The intensity of the jaundice is a good diagnostic point, but is not always reliable.

In children beyond the age of infancy, jaundice is usually catarrhal. Slow pulse and itching of skin are uncommon in children. Toxic symptoms, due to the accompanying indigestion, are most prominent.—*Still. Medical Press.*

Water is a cheap medicine for babies; but it is one of the best, if used properly. Milk is the best food for infants; but other food should be given at the proper time.

Cold Bathing.

A short, cold sponge or shower bath after the usual morning tub is about the best tonic for a child. Dry rapidly with a rough towel afterward.

Every infant should be accustomed to a cold bath by gradually lowering the temperature of the water in which they are bathed, till at six months the water is only 90 degrees Fahrenheit, and the rapid sponge-over is five degrees cooler.

A child brought up in this way will more than pay for the extra trouble in bathing by not taking cold. Even in those cases where the child is said to be always "taking cold," the giving of the cold bath will soon overcome the tendency.

An attack of indigestion is a serious misfortune to a young child. The younger the child, the greater the misfortune. A single careless feeding may be the beginning of weeks of digestive disturbances.—*Diet. and Hygienic Gazette*.

It is necessary to exercise care lest one generalizes from the fact that some babies seem so constituted that they are able to stand almost any kind of abuse.

Specific Action of Human Milk.

Is it possible, Eserich asks, that there is some substance in mothers' milk which stimulates metabolism? This would explain the inconsistencies observed and the result of natural feeding where there is almost a specific reaction to mothers' milk. If so, this renders futile all our attempts to do more than approach mothers' milk in artificial feeding.—*Diet. and Hygienic Gazette*.

[We were under the impression that the peculiar phosphorus combination present in human milk was the cause of the influence on general nutrition.] C.S.M.

Prevention of Pulmonary Tuberculosis in Predisposed Children.

Robison (in *Jour. Amer. Med. Asso.*) claims that equal consideration should be given to the two factors in the causation—heredity and the bacillus. Predisposition in about 38 per cent. of cases. Healthy persons possess a certain degree of immunity, and transmit this to their offspring. One parent being tuberculous lessens the immunity of the child, and both being tuberculous, the child is in great danger. Children of infected parents are themselves easily infected, directly or indirectly.

It is the duty of physicians to educate parents in proper methods of rearing predisposed children. Watch the diet of infants, and keep nutrition up to the highest point. Especially accustom them to fat. In children, pay particular attention to the nitrogenous food.

At the critical period of puberty, educate the children so that they will understand the physiological laws coming into play at that time.

All other education should be taken easily. There is too much crowding and cramming, and other exceedingly unhygienic conditions, the weak being required to do the same work as the strong. Class methods of teaching are bad for these children.

Mind and body must be developed symmetrically, especially in these cases.

Occupations for after life should be looked forward to with apprehension, unless they are outdoor ones.

Clothing of such a child must be warm and loose. No corsets or waistband supports.

Hydrotherapy, cleanliness, good air, and sunshine.

The so-called benign children's diseases, measles, partessis, etc., should be carefully watched, and the parents warned as to their very real dangers.

Nutrition is the foundation stone on which to rear all other treatment.

C. S. M.

Unbalanced Physical Development and Pubertal Morbidity.

Christopher, in a paper in the *Journal Am. Med. Asso.* for September 14th, gives the results of certain measurements made of some six thousand school children. These were all children attending public schools and belonging to families who are in comfortable circumstances, a fact which has considerable bearing on the results. The measurements included net height, sitting height, weight with indoor clothing, endurance as measured by the ergograph, strength of grip of right and left hand, and "vital capacity."

Numerous charts and tables are given, and should be carefully studied by all who desire to understand the reasons or much that is puzzling in children about puberty, and, indeed, before.

The conclusions drawn from the work done are as follows:

1. There is an exaltation of life processes at the pubertal period which finds expression not only in an increased rate of growth, but also in development of physical power. This exaltation is preceded by a period of relative quiescence. In the sexes this exaltation differs, in that it commences earlier and has a shorter duration in girls than in boys; moreover, it is more marked in girls than in boys in weight and in stature, but less in measurements involving physical power.

2. Puberty is also a period of great individualization, as indicated by the great normal range of physical measurements at this period.

3. The range of all physical measurements at all ages in childhood, including puberty, is distributed uniformly above and below the line of average measurement.

4. At puberty, mortality is low and morbidity high.

5. Neuroses, psychoses, neurasthenias, cardiopathies, deformities and anemias are the principal morbid manifestations of the physical, intellectual and emotional turmoil which characterizes puberty.

6. The great range at puberty of the measurements of the physical features of the child expresses the condition which permits the existence in individual children of unusual lack of balance in physical measurements, or maladjustment of physical features.

7. Unbalanced physical development is an important factor in producing morbid manifestations. It is operative throughout the developmental period of life. It occurs with the greatest frequency at puberty, and there finds its most marked expressions. It is found in causal relation with most of the morbid manifestations of puberty, particularly disturbed heart action, dilatation of the heart, fatigue, anemia, many of the neuroses, round shoulders and scolioses.

C.S.M.

Report on Child-Study Investigation.

A report issued by the Chicago School Board on the above subject is to hand. The work done was among children of American parentage, well clothed and fed, the object being to obtain measurements of fairly normal children. The measurements mentioned in the extract above were taken as well as tests of hearing.

The tables and charts show much that is interesting. In work on the ergograph the charts show the girls to be everywhere below the boys in endurance, the difference being nearly constant during the ages 6, 7, 8, 9, but after that the boys increase in endurance much more rapidly than girls. On the average, the girls have 79 per cent. of the strength of boys. If true, these results ought to have some bearing on co-education.

Strength of grip and vital capacity charts show somewhat the same differences in favor of the boys.

In regard to Prof. Porter's observation that the brighter children in a room had a greater mean weight than the mean weight of the whole room, the reporter's conclusions are that on the average these pupils who have made great intellectual advancement, are taller, heavier, and stronger than their duller companions.

[This is on the average only, it must be remembered.]

In the observations on height, it is shown that the tallest pupil in the third grade is but little shorter than the shortest pupil in the eighth grade, a reason for adjustable desks.

Ergograph charts show that the extremes of endurance are not so divergent in the lower grades as in the higher, therefore in the higher grades the work should be more elastic.

Extremes of strength and vital capacity are also more divergent in upper than lower grades. Rooms are graded on an intellectual basis only, therefore physical culture, as at present carried on, is wrong.

In hearing, the number of pupils whose hearing is subnormal so far as to place them at a disadvantage, increased from 6 per cent. at 6 years to 33 per cent. at 14 years. For lack of space it is not possible to conclude extracts from the reports at hand or to comment on them. We hope to finish quoting from present reports next month, and at the same time show the inestimable benefit such work is capable of conferring on our school children. It is also possible to use the plan of measurements in private practice, where, once used and thoroughly understood, they will not be given second place to any other form of examination in many cases, if not most, of the troubles referred to above.

C.S.M.

Editorials.

THE LATE PRESIDENT MCKINLEY.

No Sovereign, no President, no man in any country outside the British Empire was so highly respected and so much beloved by the citizens of Canada as the late William McKinley—"without reproach in life or fear in death, Christian knight, twenty-fifth President of the United States" (*Jour. A. M. A.*). While we all deeply sympathize with the citizens of the United States in the appalling calamity which has befallen them, our chief aim as medical journalists is to consider the illness and death of Mr. McKinley in their surgical aspects. We have purposely abstained from giving minute particulars or making any comments until full information was at hand. There is now such an abundance of literary material at our disposal that we are only able to give a brief synopsis of the most important articles on the subject which has been published.

We publish in this issue a detailed account of the case, as nearly complete as possible, with the limited amount of space at our disposal. First, we give an abstract of the very interesting narrative by Dr. Nelson W. Wilson, the sanitary officer of the Pan-American Exposition, published in the October issue of the *Buffalo Medical Journal*, edited by Dr. Wm. Warren Potter. The other portions of our report are taken chiefly from the bulletins issued daily, and from the official report of the physicians and surgeons as given to the medical press, including the remarks on the operation. We omit many details as to treatment, urinalyses, blood examinations, and other matters.

Of course, many criticisms came from all parts of the world. Most of the unfriendly and even unjust criticisms appeared in the medical and lay press of New York City. The most unfriendly medical criticism appeared in the *Record*. The first question that arises is: Was early operation advisable? The results of non-intervention in cases of perforating wounds of the abdominal cavity during the wars, from the time of the American civil war to that of the Spanish-American and the Anglo-Boer wars, have been so satisfactory that masterly

inactivity on the battlefield is approved of by such authorities as Senn, Nancrede and Parker, of the United States, and MacCormack, Treves and others, in Great Britain. It has been pointed out, however, by the surgeons whom we have named, and others, that rules which apply to military surgery are not the best in civil practice. One of the chief reasons for this statement is the fact that the modern rifle ball is small, conical, travels with great velocity, and cuts like a knife, with little or no bruising. The ordinary pistol ball, on the other hand, is usually larger, rounder, travels with less velocity, makes a larger and more ragged opening, with much more bruising. We are glad to be able to say that there is a general consensus of opinion that immediate operation in this case was the right procedure.

Was the operation properly performed? All will probably agree that the operator showed great skill and good judgment, so far as he went. Should he have gone further, and learned more about the direction and condition of the bullet-track and surrounding structures? It was deemed advisable, chiefly on account of the President's condition, not to spend any further time in making such an investigation. We firmly believe that the operator exhibited that virtue not always possessed by surgeons—he knew when to stop. All the evidence goes to show that further search would have done no good, and might have caused death on the operating table.

Was the patient properly treated after the operation? The only adverse criticism in this connection was the statement that a mistake was made in the administration of solid food on the morning of the seventh day. According to the bulletin, he had “chicken broth, a very small piece of toast, and a small cup of coffee. He did not care for the toast, and ate scarcely any of it.” We know now that the little bit of toast was not the cause of the serious symptoms which appeared on the afternoon of that day. The physicians apparently thought it did not agree with him, as they decided to give him no more solid food for some time. As this is rather a small matter we think we can dismiss it, and state without reservation that the after treatment of the patient was good.

Were the surgeons and physicians justified in taking such a favorable view of the case on the 5th, 6th, and 7th days? The

grave charge made against them is, that they showed too much optimism. If they erred in this respect, as in a certain sense they did, we think the error was on the right side. An atmosphere of optimism in a sick chamber is better than one of pessimism. Optimism, however, is distinctly wrong when it leads to carelessness or negligence, and worse still when, connected with it, there is a concealment of facts. In this case there was neither carelessness, negligence nor concealment. The surgeons were as frank and truthful as possible. Let us consider some of the facts. At 3.30 p.m., the day after the operation, we find the following: "The President continues to rest quietly; no change for the worse. Pulse, 140; temperature 102.2°; respiration, 24." On the fifth day we find: 9 a.m., "The President's condition this morning is eminently satisfactory to his physicians. If no complications arise a rapid convalescence may be expected. Pulse, 104; temperature, 99.8°; respiration, 26. In the afternoon some stitches were removed, and at the same time some foreign material carried in by the bullet." Full particulars were given in the bulletin. We find on the sixth day: 9 a.m., "The President rested comfortably during the night. Decided benefit has followed the dressing of the wound last night. His stomach tolerates the beef juice well and it is taken with great satisfaction. His condition this morning is excellent. Pulse, 116; temperature, 100.2°."

On the morning of the seventh day we are told: "The President seemed at his best. The time for peritonitis and sepsis had passed. The bowels had moved, and gas passed freely. The tongue was clear, and the appetite increasing; and he seemed to be able to digest food. There was no pain nor tenderness in the abdomen, and he was able to turn easily and to sleep on his side. The urine was steadily increasing. His spirits were good and his mind clear, while his pulse, though frequent, was strong and of good quality, and the temperature low."

We think these records showed so many good features in the way of improvement that the physicians had good reason to hope for recovery, although the patient could hardly be said to be out of danger. Drs. Mann and Park, who incurred the chief responsibility, state positively that at no time were they free from anxiety.

The *British Medical Journal* (friendly in all its criticisms) says: "In abdominal cases the character of the pulse and its frequency are, it is no exaggeration to say, of greater consequence and import than all other signs." That statement is correct, although we are not quite so certain that another statement—"The pulse-rate was never even moderately satisfactory"—is exactly right. When, after an abdominal section, the rate of the pulse steadily increases from day to day for five or six days, we can generally say, without much, if any, consideration of other signs, that the patient will die. This is especially true when it also becomes weaker. But when a pulse drops from 140 to 104 in five days, and at the same time becomes stronger in character, we think it may be considered, at least, moderately satisfactory. When, at the same time, with this marked improvement in the pulse, there is a decided improvement in almost every other direction (as ordinary signs go after abdominal sections), we think there are fair grounds for a favorable prognosis. It should be remembered that the President's pulse was naturally fast, or at least, had been so for years.

While we express such an opinion, we must, at the same time agree with the London *Lancet*, when it says: "In no part of the body are sinister surprises more likely to be met with than in the abdomen. Patients who have progressed, and are progressing, most favorably cannot be considered to be out of danger until they have ceased to be patients. Great as is our knowledge to-day of the injuries of the abdomen, many as are the resources of the surgeon, skilful as may be his operations, yet there are elements in any case of abdominal injury which may render in vain all his knowledge, his resources, and his skill."

Many stories were circulated as to mutual recriminations between the surgeons after the President's death. We are happy to say that all such statements were absolutely without foundation. Mynter, who arrived first, gave way to Mann, who operated. Park, who, as director-general of medical matters at the Exposition, should have performed the operation, was twenty-five miles away, and only arrived when the operation was nearly finished. Yet Mynter and Park worked cheerfully and faithfully with Mann and the other surgeons and physicians in their untiring efforts to save the

life of their patient. The coterie of devoted men who attended President McKinley were as fine a body of scientific and practical surgeons and physicians as could be gathered together in any part of the world. Bitter is our disappointment at their failure; but great is our respect for their bravery, their skill, and their care in the treatment of their distinguished patient. They have earned the gratitude, not only of a great nation, but also of the whole civilized world.

WORKMAN'S INSURANCE IN GERMANY AND ITS EFFECT IN THE TREATMENT OF CONSUMPTION.

While on the Continent a few months ago, the writer was told that the system of insurance for workingmen in Germany had proved in all respects successful. In an article which recently appeared in the *British Medical Journal*, written by Privy Counsellor Bielefeldt, much useful information as to the methods in vogue in that country will be found. In accordance with an Act passed in 1891, a large proportion of the workingmen since that time have been insured against sickness and old age by contributions in equal parts from the employers and the employees. We have been told that in certain cases the Government also contributes a certain amount towards the fund. Whether this be correct or not we are not sure, but we know that the Government renders at least indirect assistance. "The insurance is under the supervision of the Imperial Insurance Department, and is effected by means of local institutions or clubs." One of the chief advantages of such an arrangement is that all parties—both employers and workmen especially—are interested in preventing any unworthy or fraudulent claims.

An investigation some years ago showed that of every 1,000 cases of sickness 350 were suffering from phthisis. A law was enacted whereby the insurance companies were empowered to undertake methods of cure or of prevention. Not much attention was paid to this law for some time; but, during the last three or four years, it has been discovered that money may be more economically expended in preventing and curing diseases than a simple caring for those who are sick. As a consequence

there have been established in Germany a large number of sanatoria for consumptives. In 1900 more than 3,000,000 marks were devoted to the relief of consumptive patients. As the laws now stand, the insurance companies can send the sick to hospitals, sanatoria, health resorts, or to the care of private persons as may seem best; but, at the same time, no compulsion is allowed. Much has been said about the large number of sanatoria for consumptives in England. They are mostly, however, built and owned by private individuals for the benefit of those who are able to pay. We believe that the result of the changes in the laws and customs of Germany has been the inauguration and building of a larger number of sanatoria for consumptives among the working classes than will be found in any other country.

THE CELEBRATION OF RUDOLPH VIRCHOW'S EIGHTIETH BIRTHDAY.

The celebration of Virchow's eightieth birthday was probably the most flattering thing of the kind which the world has known. All peoples of all countries in the civilized world appeared to unite in doing honor to this great scientist. The chief event in connection with the celebration on this continent was the dinner held in New York on the evening of October 12th. Among those present were Professors Osler (who acted as chairman) and Welch of Baltimore; Dr. Gould, of Philadelphia; Drs. Jacobi, Andrew H. Smith, and C. L. Dana, of New York, and about one hundred other representative medical men.

We publish in this issue an abstract of a very interesting account of the proceedings of the chief celebration in Berlin which appeared in the *British Medical Journal*, October 19th. In the same issue we find an article, entitled "A Personal Impression," by Sir Felix Semon, a native of Germany, a resident of London, England, and a former pupil of Virchow's. We quote as follows from his remarks on the official function: "The celebration from beginning to end was so extraordinary of its kind, that as yet but three things stand out prominently from the kaleidoscopic impressions which overwhelmed us

yesterday: the conviction that surely never before had a richer life been lived than Virchow's, the joy and gladness that on the evening of such a life the achievements of this unique man are universally acknowledged without a single dissentient voice being heard, the thankfulness that such a man should have been spared to the world in such astonishing vigor of mind and body as this 'Grand Old Man of Science.' For to begin with the last-named fact, surely it was astonishing that in the morning this octogenarian should have on the eve of his eightieth birthday treated the audience, which he had invited to his pathological museum, the pride and the joy of his old age, to a wonderful retrospect of the past, and a sketch of the future of pathology, made a speech of one and a half hours' duration, a speech made without notes, should have sat through and have made at a two hours' dinner in the evening one of the most felicitous and humorous dinner speeches ever heard, and should after this have listened and replied—standing almost the whole time—to speech-making, which lasted from 9.30 to 12.30 p.m., without any interruption, saying a kind word or two to almost everybody who had come to do him honor."

CONGRESS OF NURSES.

A congress of nurses was held in Buffalo during the week ending September 21st. It is said to have been the largest gathering of nurses ever known in the world. This is the third world's congress of nurses, the first having been held in Chicago during the World's Fair in 1893, and the second in England in 1899. One hundred and two separate nurses' organizations were represented at the Buffalo meeting, with memberships totalling something like fifteen thousand. Two meetings were held daily, morning and afternoon, and among the subjects discussed were the following: Hospital Administration, The Three-year Course, Nursing of the Insane, Army Nursing, Women on Hospital Boards, Tenement-house Inspectors, and Preparatory Instruction of Nurses. Miss M. A. Sniveley, Superintendent of the Training School for nurses, Toronto General Hospital, was one of the Vice-Presidents of the Congress. Apart from the admirable and interesting work done at the various sessions the visiting members were entertained most generously by the women of Buffalo.

Personals.

Dr. Law has been appointed Medical Health Officer of Ottawa.

Dr. James Stewart, of Montreal, visited Toronto, October 19th.

Professor Wm. Osler, of Baltimore, returned from Europe, September 24th.

Dr. James Curry Smith, Barrie, was married, October 3rd, to Miss Ethel B. Scott.

Dr. Jerrold Ball, of Toronto, spent the month of September on the Atlantic coast.

Hon. Dr. Borden, Minister of Militia, sustained a fracture of the fibula at the recent accident in the Hon. Mr. Tarte's yacht.

Dr. John Hunter, of Toronto, left October 3rd for New York and Baltimore, where he spent some weeks at work in the hospitals.

Dr. Alexander C. Robertson, formerly of Madoc, Ontario, now of Dawson City, Y.T., was married, September 23rd, to Miss Lila G. Thayer.

Dr. Agnes Turnbull, who recently visited her friends in Canada, has returned to Central India, where she is engaged in Presbyterian mission work.

Dr. W. E. Struthers sailed from Montreal for Europe, October 5th. He expects to spend a year at post-graduate work in London, Edinburgh, Vienna and Berlin.

Dr. Harry W. Spence, of Toronto, has passed the examinations for L.R.C.P., London, and M.R.C.S., England, and is now a surgeon in the SS. *Mombassa*, one of the British India Steamship Company's passenger steamers sailing between London and Calcutta.

Hon. Dr. Montague, formerly Minister of Agriculture, is still in Australia, and is said to be doing good work for Canada by his public speeches in which he urges the importance of more intimate relations between the Commonwealth of Australia and the Dominion of Canada.

Dr. J. F. Boyle, '96, left for Europe on October 11th, 1901. He has been appointed ship's surgeon to the Elder-Dempster Co. His first commission is on a vessel sailing to the Madeira and Canary Islands and the West African coast. After sailing about a year he expects to take up post-graduate work in London and Edinburgh.

Obituary.

FRED. C. WALKER.

Dr. Fred. C. Walker, a well-known Toronto boy, a graduate of Parkdale Collegiate Institute, and a student of Trinity Medical College for the last four sessions, died September 23rd in the Western States.

WILLIAM STOTEN FRANCIS, M.A., M.B.

Dr. W. S. Francis, of Gore Bay, Algoma, died October 16th; aged 68. He graduated in the University of Toronto as follows: B.A., 1857; M.A., 1858; M.B., 1859. His remains were buried in Owen Sound, October 19th.

JAMES GUN, M.D.

Dr. James Gun, of Durham, died October 23rd. He was a native of Thurso, Scotland, and came to Canada in 1852. He graduated, M.D. at McGill in 1861, and settled at once in Durham, Grey County, where he was engaged in practice up to the time of his last illness.

GEORGE M. McMICKING, M.D.

Dr. George M. McMicking, of Toronto, died at his home, No. 1 Washington Street, October 13th, aged 77. He was born in Chippewa and received his education chiefly at Upper Canada College and McGill Medical College. After graduating in 1849 he practised in Chippewa until 1867, and then removed to Goderich, where he practised until 1889, when he came to Toronto.

TRUEMAN WALLACE DUNCOMBE, M.D.

Dr. T. W. Duncombe, of St. Thomas, died suddenly in his office, October 2nd, aged 42. He had been slightly ill for a few weeks, but no serious results were anticipated. He had done his work as usual during the day, and at 10 p.m. he was seized with a severe pain in the heart, and in a few seconds fell to the floor. The doctors who were hurriedly summoned found him dead.

Dr. Duncombe graduated, M.D., University of Trinity College, Toronto, in 1882, and in the following year became L.R.C.P., Edinburgh. After returning from Europe in the latter part of 1883, he commenced practice in St. Thomas, where he remained in active work until the day of his death. He was well known in Western Ontario, and highly respected by all classes. He was a prominent Liberal, and was mentioned as a probable candidate in the coming election for the Local Legislature in West Elgin.

Correspondence.

THE PHILOSOPHY OF THE SCIENCE OF LIFE.

To the Editor of the CANADIAN PRACTITIONER AND REVIEW :

SIR,—At no period in the history of nations can we find any evidence that would indicate a wider dissemination of education, learning and general knowledge than obtains in the present. Yet it is a deplorable fact that superstition and puerile credulity continue to exercise their baneful influence on mankind. To such an extent is this influence felt that a partial paralysis of a nation's energies may ensue, followed, endemically, by torpor, stagnation, retrogression and decay. Nations, like individuals, may therefore succumb to an inertia resting on ignorance and fatalism.

It may be assumed that the cause of such a condition of things may be either gross ignorance on the part of the masses, or to one-sided education and cupidity on the part of a few. But the danger and the difficulty in connection with the subject will be found to lie not so much in the ignorance of the masses as in those whose education is one-sided, and whose thoughts and opinions were moulded by the philosophers and metaphysicians of, say, two thousand years ago. One-sided education tends, if not to intolerance, to egotism and bigoted narrowness, so that men and women who are ignorant of the physical sciences, or who decline to recognize positive scientific achievements as facts, are in a great measure unworthy of trust in educational matters, and are but indifferently qualified in any sense to teach their fellow-men and women of the twentieth century. Yet aggregations of such people continue to constitute themselves into oracular bodies to fashion the lives and determine the destinies of the thinking and unthinking masses of mankind.

Such one-sided teachers are apt to be eminently conservative and opposed to modern thought and progress. They represent the class of men who dominated the world in mediæval and more recent times, and they sometimes act as if they entertained feelings of regret that their predecessors did not effectually extinguish the lights of such men as Friar, Bacon, Copernicus, Gallileo, Kepler and Newton, and, in later times, of Priestly in England, and Lavoisier in France. Much, therefore, of the rampant but irrational credulity that flaunts itself before the eyes of the world to-day in the form of Christian science, spiritualism and miracle working can, and must be attributed to one-sided egotistical education. This does not apply to the clergy any more than to the press. For both

press and pulpit are equally culpable in neglecting to properly qualify as true scientists in order that they may be able to distinguish between the genuine and the counterfeit, for they should know that there is science and pseudo-science.

It should be the aim, therefore, of medical men to discountenance one-sided education on the part of teachers, preachers and others, and to administer the proper antidote on every opportune occasion to neutralize its pernicious effects by insisting as a *sine qua non* that all men and women who profess to teach mankind, either in the school, the church or the newspaper office, in matters pertaining to science in any of its many branches, shall be thoroughly qualified to do so. No one can know anything of science unless he be well grounded in up-to-date chemistry, physics, biology and physiology. Any one who talks science and is yet wanting in a knowledge of the foregoing essentials is usually a friend of the spiritualist, the faith curist and the Christian scientist, and is, as a rule, a firm believer in ghosts and miracles.

Prof. Huxley says: A thorough study of human physiology is a broader and more comprehensive education than much that passes under that name, and that there is no side of the intellect which it does not call into play, nor any region of human knowledge into which its roots or its branches do not extend. Its waves wash the two shores of mind and matter, and through its intervening waters lies the road, if such there be, from the one to the other.

Socrates, a few hours before he drained the fatal cup, is said to have entertained his sorrowing friends with a discourse on the immortality of the soul. He left posterity nothing, however, which would clearly show that he knew anything positively about the nature of the soul. His arguments were purely speculative and metaphysical, and furnish but little assistance or comfort to a modern investigator. The philosophy of Aristotle and Plato is of the same nature and of the same value as that of Socrates. We admit these men were great philosophers and metaphysicians, but they knew absolutely nothing of the properties of matter as we know them. Our knowledge of the physical or material universe has enabled us to invade the realm of metaphysics to such an extent that only a fragment of it may be said to remain unexplored. That fragment is the battle-ground on which the monist and dualist is now contending for life and supremacy.

Scientific materialism, or monism, affirms that everything in the world goes on naturally, and that every cause has an effect. It assigns to casual law its place over the entire series of phenomena that can be known, and it positively rejects every belief in miracles and every conception of supernatural pro-

cesses. It does not recognize metaphysics in any region, but relies throughout its arguments and demonstrations entirely on physics to show the inseparable connection between matter, form and force. This position, I need hardly say, is greatly in advance of that occupied by Priestly, and from which his opponents endeavored to drive him by persecution, but they only succeeded in forcing him into exile. Priestly and Lavoisier having demonstrated that the atmosphere was composed of sensible gases, it remained for their successors in every part of the world to carry on the work unremittingly in order to acquire a positive knowledge of the properties of the atoms and corpuscles that constitute the unseen universe about us.

Philosophers, like Descartes, discoursed learnedly about etherial waves, etherial rings and etherial vortices, but they knew positively nothing of their nature or their properties. We know that ether is but matter in a subtile form, and that its properties and phenomena are due to its accompanying energy, so that logic and abstract reasoning are only good up to a certain point, after which they must yield to something more substantial.

The philosophy of scientific dualism which is opposed to that of monism, implies a belief in a spirit or in some force, or efficient cause other than material or mechanical. This scientific dualism must not be confounded with theological dualism, which is entirely metaphysical, and supposes two co-eternal principles—one good and one evil, but which the Christian Church, while ostensibly practising, has always condemned. Scientific dualism, then, believes in mind as distinct from matter. This position, until recently, was apparently very reasonable and almost unassailable.

The ultimate conception of matter was formerly conceived to be any atom. Now we know that an atom may be divisible into a thousand smaller particles, known as corpuscles, which may be seen and investigated as Lennard's rays, as they are thrown off the cathode or negative pole into a Crooks' tube. It has been found that these corpuscles are charged with negative electricity, while the atoms which are thrown off at the anode, or positive pole in a Crooks' tube are charged with positive electricity. From this it may be fairly assumed that matter may be subjected to some process by which the ultimate divisibility of its corpuscular particles may be carried so far as to practically destroy it. Or it may, in other words, be changed into an intermediary substance seemingly having neither material nor spiritual properties. Such a substance would, however, be identical with ether, and we know that ether is only matter in an extremely subtile state.

The views of monists and dualists are mainly in accord on inorganic phenomena; and it is only when they enter the organic kingdom and meet life that a divergence between them is seen. The dualist who may, or may not, be a theologian, declares that the cause of inorganic things is not sufficient to explain the life of organic things. He wants a second cause. The scientific monist on the other hand, asserts that between inorganic and organic things there is no real break, and that the cause which explains the inorganic will likewise explain the organic. This view of the monists must not be taken as materialism nor pantheism. Existence, then, consists of either one order of things or of two. That is of matter only, or of matter and mind. If we accept the former, then the thing we call matter must possess consciousness and intelligence to govern and guide its energy. For if matter were not associated with consciousness it could not be, in the sense of being. That is, if we could strip ourselves of consciousness, we would annihilate ourselves and attain to nothingness; or, as Mr. Spencer says, something unknowable, and this unknowable would have to be considered the cause of everything that science endeavors to reveal. But, aside from consciousness, we do not know that the unknowable exists, so that while the unknowable may be something we could not know what that something is.

Prof. Clifford, who dismissed the idea of God and the soul, observed brusquely that atoms and ether leave no room for ghosts. Yet he maintained as strongly as anyone could have done that atoms and ether are things of whose essence we know nothing. Huxley was constantly expressing and explaining similar views. Prof. Tyndall also entertained similar sentiments on this subject. Prof. Heckel admits that matter is a thing beyond our comprehension; but he, like other monists when speaking of matter, does not mean a lifeless, inert mass, or an infinite totality of lifeless particles which require some external force to move them, but something with inherent power and intelligence to move and effect combinations.

Pantheists think matter the sum of existence. Scientific thinkers, however, repudiate that idea, and those who believe in the monistic theory, conceive that the universal substance or matter was not a creation of God, nor is it permeated by God. But, on the contrary, that it is an aspect of God, which He himself could no more alter than he could alter His own nature. Nor could He divest himself of this substance without ceasing to be. They say, moreover, that consciousness, which we have attributed to God, is developed gradually in individual lives, and that while the universal substance may

be a mystery, it is no more difficult to suppose an eternal, self-existing and self-energizing substance, than it is to suppose an eternal self-existing and self-energizing God. This is not an irrational supposition. In fact, as a hypothesis, it looks as reasonable as the religious conception.

But the dualistic scientist and theologian or theist conceives that God is a spirit, and that this spirit created the material universe, and that this spirit is both imminent and transcendent, and that this spirit is the source of the energy which gives movement to matter. They say that science is necessarily agnostic; but they agree with science in saying that all the empirical elements may at last be reduced to one. That is to say, the seventy odd elements that we may have knowledge of are but that many forms of the same thing resulting from the various combinations of corpuscles or atoms under different degrees of heat and pressure. In a word, matter primarily had but one form.

The theistic dualist assumes a second cause as the author of life or the soul. The phenomenon of life differs from all those that lead up to it, and from the moment it makes its appearance it is apparently capable of independent action.

The monist says, that while science has not yet produced organic life artificially it is gradually filling up the rift between the inorganic and the organic, and should it fail to evolve life it would not be fair to assume that it was never done at some early period of the world's history. "If," says Heckel, "when referring to this question, physical and chemical forces alone are at work in the fields of inorganic nature, while intelligent and regulative forces dominate the organic world, we must abandon the mechanical and accept the teleological system or admit miracles." He says further: "To reject abiogenesis is practically to admit miracles. The unique phenomenon of organic life is movement, to which must be added consciousness and intelligence. Whence does this phenomenal movement come? Is organic movement evolved from the inorganic, and do the movements of crystallization resemble the movements of the protist? We cannot liken thought to brain matter any more than we can to a lump of carbon. It is not the brain that thinks, but something within the brain. This is admitted by monists no less than by dualists; but the monist says that that something which we call consciousness is but a final manifestation of a property of the universal substance which he claims to be matter.

Heckel says this hypothesis explains consciousness; and further, that consciousness is transcendental. How mental activity is affected by material conditions, and how substance comes to feel, to think and desire is a mystery which philo-

sophical science may never be able to satisfactorily explain. The explanation of this mystery may be insurmountable. If so, religion need have no fear from the assaults of science. There are those, however, who think religion is not touched by the controversy about life and consciousness. Religion teaches a belief in a cause that is a conscious being, intelligent and prescient, and that He is good and regards man with benevolence; that it consists not merely in a doctrine of God, but also with regard to man, and that man has a soul which is immortal, and that he has a will by which he determines the destiny of his soul. And, further, that the unseen order of existence of consciousness transcends the order of existence revealed to us.

The scientific monist says living organisms are due to some rigid and uniform laws that prevail through the sensible universe, and that the higher life is but the mystery of the primary cell. *Omne vivum e cellula*: all life comes from a cell. If life is something different from matter it is only known to us as its inseparable companion, and that individual life disappears never to reappear, and that all separate lives are only a part of the same general life. So that the life of a louse does not differ from the life of a human primary cell, nor from that of a saintly martyr. He also affirms that consciousness is a phenomenon of the same character.

There are those, as we have already said, who think that the controversy about the origin of life and the phenomena of consciousness has nothing to do with the problem of religion. The views of the monist may create doubt and unrest, but unless they become more positive and demonstrable they will never effectually destroy the belief in a personal God, the soul and the will. While on the other hand the assumptions of the dualist may, or may not, lead us to a conscious and benevolent God. So that religion does not begin with the phenomena of life, but with the doctrine that life is immortal; nor with the phenomena of consciousness, but with the doctrine that the will is free. The only fair deduction then to be drawn from these arguments must be that the question is still *sub judice*.

But men will continue to search and explore until more of the mysteries of life have been revealed, both in its incarnated and in its free state; and not until it shall have been shown that the non-material life or soul does not dissolve and lose its identity, or otherwise when it leaves the body at dissolution, will men be satisfied to rest and be content.

JAMES BAUGH, M.D.

HAMILTON, October, 1901.

THE AKOULALION OR AKOUPHONE.

Editor of CANADIAN PRACTITIONER AND REVIEW.

DEAR SIR,—Many inquiries have been made in regard to this new instrument. It is an electrical apparatus, which is claimed to have wonderful power in making the deaf to hear. If it is of no more value than many other devices in the market, it is well to be aware of the fact. The following candid statements, from the editorial columns of the *Canadian Mute* of October 1st, 1901, are of value in this connection. Speaking of the instrument it says: "Does it hold out the hope of relief to even a considerable minority of the deaf? In view of the very wide interest aroused in this instrument, it was decided to set aside one session of the convention of the Instructors of the Deaf at Buffalo for a thorough test of the Akouphone, in order that those present who were familiar with the deaf, and could not be easily deceived, should be able to judge of its merits for themselves, and to pronounce authoritatively upon it. The Convention comprises Superintendents, Principals and Teachers of Institutions and Schools for the Deaf in the United States and Canada, and there were enrolled at Buffalo nearly four hundred members." . . . "The test was begun with some deaf subjects. The words chosen were 'pa' and 'mamma'; and it seemed successful at first, until Mr. Mathison suggested as the one word had one syllable and the other two, the subjects could distinguish between them by the number of vibrations, and also by the facial expression and motions of the speaker. So the operator was asked to place the deaf persons so that they could not see him, and also to add "man" to the other words. He reluctantly did so, and then the test was a total and admitted failure, for the subjects were quite unable to distinguish one word from the other." So far as to the test at Buffalo. The Akouphone was, however, tried at Toronto a few weeks ago. After discussing this trial in an extended article the same paper sums up the results of this trial as follows:

"1. For those simply dull of hearing but can still hear what is said to them in a loud voice, the Akouphone may be a help. Those who intend to purchase it must understand the liability to get out of order, and that it takes in and delivers to the ear only what is brought close to the mouthpiece, and that it is no good at church, public meetings, or to hear conversation at a distance.

"2. For those whose hearing is too much impaired to hear spoken words, but who can still hear sounds distinctly, it will

only be a help after the ear has had long training in its use, perhaps for years.

"3. For those with a slight degree of hearing, and the totally deaf, the instrument is valueless." M. D.

LONDON TUBERCULOSIS CONGRESS.

Editor of CANADIAN PRACTITIONER AND REVIEW.

SIR,—Please grant me space for a comment upon two items of information of general interest contained in your recent article headed "London Tuberculosis Congress."

Professor A. McPhedran, M.D., of Toronto University, admits his presence at the Congress, but makes no mention of any part taken by him in its proceedings. The full reports of those proceedings published in the weekly medical journals, are evidence of his silence.

The Professor expresses regret that the Muskoka Sanitarium for the treatment of consumption was not represented at the meeting. Others entertain the same feeling. The solitary Ontario sanatorium for consumptives ought to have made itself heard at the great London International Congress on Tuberculosis.

Greater regret, however, is justifiable at the neglect of the Medical Faculty of Toronto University to take part by any representatives, in the important deliberations of that large assembly. Representative authorities in Medicine from the European nations, many States of the American Union, the Province of Quebec, even from Egypt, and antipodean Tasmania, had papers to read, addresses to deliver, and opinions and advice to offer, bearing on the Great White Plague and possible measures for its extermination. No voice was heard from the Provincial University of Ontario, while Professors Adami and McEachran, of McGill College, Montreal, well upheld the standing and authority of that centre of medical science.

Before concluding, permit me to point out that the Provincial Board of Health likewise failed to be heard at the Congress. Had the Board sent Dr. Bryce, the able Provincial Medical Inspector, as it ought, Ontario would have taken a prominent part in the transactions and the interests of the Province would have been advanced.

Yours respectfully,

LUCIUS S. OILLE.

ST. CATHARINES, October 1st, 1901.

Book Reviews.

Pocket Account Book for Physicians. By J. J. TAYLOR, M.D. Published by Medical Council, Philadelphia, Pa. Price, complete in leather case, \$1.00.

This is a very convenient pocket ledger for a physician who is not employing his own book-keeper. All his accounts are accessible at any time and the amount due is always in plain view. It may also be used as a visiting list by those who prefer to keep office books, and as it is undated it may be begun at any time.

Elements of Practical Medicine. By ALFRED H. CARTER, M.D., M.Sc., Fellow of the Royal College of Physicians, London; Professor of Medicine, University of Birmingham; Senior Physician to Queen's Hospital, Birmingham; Emeritus Professor of Physiology, Queen's College, Birmingham; Consulting Physician to the Corbett Hospital, Stourbridge; the Bromsgrove Hospital and the Smallwood Hospital, Redditch, etc. Eighth edition. London: H. K. Lewis, 136 Gower Street, W.C. 1901.

Since this book came out twenty years ago it has steadily grown in popularity, and has up to the present run through seven editions. This, the eighth edition, has been carefully revised, large portions have been rewritten and is in every way what its author has designed it to be—a simple and most complete introduction to the subject of medicine. The work is really up-to-date as a book of ready reference, and should receive the same support as it has had in the past.

Manual of the Diseases of the Eye. For Students and General Practitioners. With 275 original illustrations, including 36 colored plates. By CHARLES H. MAY, M.D., Chief of Clinic and Instructor in Ophthalmology, Eye Department, College of Physicians and Surgeons, Medical Department Columbia University, N.Y. Second edition, revised. New York: William Wood & Co. 1901.

In reviewing the first edition of this book, we expressed a high opinion of its merits. That opinion has been justified by the rapid sale of the edition, it having been exhausted in less than eight months. An examination of the second edition now before us shows that the work has been carefully revised. The first edition, however, was brought well up-to-date, so that not many changes would be expected in the second. The most notable change is the addition of seven new colored plates. These, with the plates which were contained in the first edition, make it as the author remarks, a short, practical ophthalmological atlas, in addition to its other uses. It may be commended as one of the best of the smaller works on ophthalmology.

J. T. D.

Principles of Surgery. By N. SENN, M.D., Ph.D., LL.D., Professor of Surgery in Rush Medical College in Affiliation with the University of Chicago ; Professorial Lecturer on Military Surgery in the University of Chicago ; Attending Surgeon to the Presbyterian Hospital ; Surgeon-in-Chief to St. Joseph's Hospital ; Surgeon-General of Illinois ; Late Lieutenant-Colonel of United States Volunteers and Chief of the Operating Staff with the Army in the field during the Spanish-American War. Third Edition. Thoroughly revised with 230 wood engravings, half-tones, and colored illustrations. Royal octavo. Pages xiv.—700. Extra cloth, \$4.50, net ; sheep, or half-russia, \$5.50, net. Delivered. Philadelphia : F. A. Davis Company, Publishers, 1814-16 Cherry Street.

To those of our readers who are not familiar with the former editions of this work we would say that it is very extensively what its name implies, "A Treatise on the Principles of Surgery;" that it omits *seriatim* details to make room for a thorough consideration of the various morbid and reparative processes, for the etiology and pathology of the former and the histology of both, and for the principles of repair. For example, the principles of the processes by which fractures are repaired are fully given and the general means to be adopted, but not the mechanics of the occurrence and treatment of such individual fracture. In some cases, however, detail is given, e.g., the treatment of brain abscess ; and in some of the morbid processes the principles necessarily cover all the details of treatment. In this edition two new chapters are introduced, one on "Degeneration," the other on "Blastomycetic Dermatitis." The rest of the book has been re-written and kept in the advance line by the interweaving of recent knowledge. Many skiagraphic plates of osteomyelitic, tubercular and other bone lesions appear. Those who know Dr. Senn's busy life and something of his clinical work will wonder where he finds time and energy left for the writing of systematic general treatises.

The Diagnostics of Internal Medicine. A clinical treatise upon the recognized principles of medical diagnosis, prepared for the use of students and practitioners of medicine. GLENTWORTH REEVE BUTLER, A.M., M.D., Chief of the Second Medical Division, Methodist Episcopal Hospital ; Attending Physician to the Brooklyn Hospital ; Consulting Physician to the Bushwick Central Hospital, etc. Five colored plates and 246 illustrations and charts in the text ; 1,058 pages. Cloth, \$6.00 ; sheep, \$7.00. New York : D. Appleton & Company. 1901.

This is a magnificent book and one which no student or physician can afford to be without. It is good all through, the sections on the blood and venous system especially being worthy of remark. For assistance in practical work or for reading we have yet to see its superior. It is up-to-date, practical, and as accurate as medical knowledge of symptoms and indications as diagnostic of disease will allow. We prophesy a large sale for the work on account of its general worth to the

physician or student. The author says that most of the illustrations are original. That very many are cannot be denied. Somebody assisting or connected with the work has a very large acquaintance with a very good taking and accommodating list of lady models. Rarely have we seen so many exact and natural half-tone reproductions in any book; never in a medical work. They might be taken from *Vanity Fair* were it not for the fact that the posing seems evidently to have been done specially for this text-book; and then, the *Vanity Fair* models have generally a drape on somewhere. That illustrations are valuable mnemonic aids the author evidently believes strongly, and we venture to say that no one will ever forget the areas mapped out on the body in the half-tones, say, on page 501, or, if they do, they at least will not forget where to turn to refresh the memory.

Practical Surgery: A Work for the General Practitioner. By NICHOLAS SENN, M.D., Ph.D., LL.D., Professor of Surgery, Rush Medical College, Chicago. Handsome octavo volume of 1133 pages, with 650 illustrations, many in colors. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$6.00 net.

Dr. Senn's great work has been awaited by the profession with much interest, for it represents the practical operative experience of the author for the last twenty-five years. The book deals with those sections of surgery that are of special interest to the general practitioner. The author has aimed to simplify those subjects that come within the legitimate sphere of the daily routine work of every practising physician. Special attention is paid to emergency surgery. Shock, hemorrhage and wound treatment are fully considered. All emergency operations that come under the care of the general practitioner are described in detail and fully illustrated.

The section on Military Surgery is based on the author's experience as chief of the operating staff in the field during the Spanish-American war, and on his observations during the Græco-Turkish war, thus adding materially to the value of the book as a guide to practice. The book is in all respects well adapted for the needs of advanced students, surgeons and general practitioners. Dr. Senn is well known in Canada, not only as a broad-minded surgeon, but also as a great teacher of surgery. We can assure his many admirers that a careful perusal of this book will not result in anything like disappointment. His practical, common sense method of putting things will, we are sure, be highly appreciated by all.

Selections.

SURGICAL HINTS.

In bad injuries of the fingers, in which you consider rest essential, it is often best to splint the hand and whole forearm, as nothing else will induce certain patients to keep the limb quiet.

To remove foreign bodies in the ear, dip the end of a camel's hair brush in glue and leave it in position against the body. When dry after a few hours, pulling upon the brush will remove the whole thing.

Sterilized oil and liquid vaseline are the best lubricants for steel sounds, which should be dipped in them as far as possible. The use of semi-solid lubricants is unadvisable because they cannot be well kept sterile, and because they may be wiped off by the urethra in great part, leaving the unlubricated surfaces.

In fractures of the head nothing but an antiseptic dressing, if the scalp is torn, is allowable, unless there is evident depression of bone or there are brain symptoms evidently pointing towards compression. And in the latter case no surgical attempts are permissible unless it is certain that the compression has taken place in an accessible region.

When passing a stomach tube upon a refractory patient, as in many cases of attempted suicide, a mouth gag is necessary. If a regular instrument is not at hand, cut a piece of wood sufficiently wide to distend the mouth when placed over the molars. In the middle of this make a hole large enough for the tube to pass through, and push the latter firmly down.

In most cases of vaginismus, if the surgeon looks carefully, he will find some lesion of the mucous membrane which seems to bear a causative relation to the existence of the trouble. It is either red and erythematous, or there are little fissures or tears, or protruding spots made by inflamed pupillæ. Forced dilatation of the vagina with local treatment for the lesions will give the best results.—*International Jour. of Surgery.*

Rupture of the Heart.

Jolly (*Independ. Med.*, July, 1901) reports a case entering the Hotel Dieu with symptoms of respiratory embarrassment for some days, but showing only some slight pulmonary congestion. Death took place two days later, while the patient was in the act of vomiting. At autopsy a distended pericar-

dium was at once visible, from which, on opening, a serous fluid exuded, followed by several laminated ante-mortem blood clots. On further examination a small depressed area, with a distinct fissure 4-6 mm. in length, was found in the left ventricle quite near the apex. The fissure communicated freely with the left ventricular cavity. The heart muscle showed an advanced condition of fibrous myocarditis, the fissure seeming to exist in one of the numerous fibrous patches.—*International Medical Magazine*.

Urotropin in Intestinal Decomposition.

Prof. E. Loehisch, at a recent meeting of the Medical Society of Innsbruck, gave the results of his experiments upon the use of urotropin in intestinal decomposition. Loehisch found quite accidentally that the drug inhibited intestinal fermentation, through his failure to find indican in the urine of patients taking urotropin. He showed by tables prepared by his assistant that the indican decreased *pari-passu* with the amount of urotropin administered; but in inverse ratio; until finally it disappeared altogether. He then endeavored to see whether this property could not be utilized therapeutically. It is well known that indican is increased in the urine in obstruction of the small intestines, chronic wasting diseases, such as cancer of the stomach, and, in general, it is considered to indicate disturbance of the normal decomposition processes of the alimentary canal. Disinfection of the intestinal canal is desirable in many cases in which agents like calomel are not appropriate; and the drugs generally used have not been found altogether practicable because, perhaps, most of them are poisons. Urotropin is very soluble in water, inhibitory to intestinal decomposition, valuable in certain urinary diseases, and is said to be harmless even when taken for weeks in medicinal doses.—*International Medical Magazine*.

Gersuny's Subcutaneous Paraffin Protheses. L. MOSZKOWICZ *Weiner Klin. Woch.*

Gersuny has now an experience of thirty cases treated by the subcutaneous injection of paraffin and the results have been invariably satisfactory. Two years have elapsed since his first experiments and the result now is the same as at first, demonstrating that the prothesis can be considered permanent. The paraffin evidently becomes encapsulated in time and persists indefinitely without change. The patient first treated—a prothesis of the testis, May, 1899, after bilateral castration—has since passed through a typhoid fever with temperature of 40 C. The paraffin seemed to be temporarily much softer at this time. Otherwise the artificial testis are the same as at first. No. 2

was a woman cured of incontinence of urine due to total loss of the sphincter and urethra—already mentioned in *The Journal*. The paraffin was injected around the vesital sphincter and the ring pushed into the bladder. This forms a valve projecting inward, which has put an end to the oozing of urine which had been continuous for five years. The effect has been permanently satisfactory. Pfannenstiel failed in a similar case as he did not reduce the paraffin ring and consequently the valve opened outward, and was not water-tight. He injected paraffin with a melting point at 45 C., which is much too high; as it can not be injected unless it is hot, and this favors its absorption and is liable to cause pulmonary embolism, which, in fact, did occur in his case. In patients Nos. 3 and 4, paraffin was injected into the palate or roof of the mouth to close a defect interfering with speech. Nos. 5 to 8 were injected in the anal sphincter to close a cicatricial defect in the sphincter left from a periproctitic abscess or extirpation of a rectal carcinoma. Prolapse of the rectal mucosa was cured in one patient by injecting 10 c.c. under the prolapsed tissue. His artificial anus was also rendered continent for the first time by the injection of 6 and later of 8 c.c. of paraffin around the orifice, partially closing it. The anus is thus rendered continent and the desire gives ample warning, but hard stools require some effort to void them. Nos. 9 to 11 were patients with hernia who refused operation. By the injection of a ring of paraffin around the hernia, an internal pad was formed, which supplemented the action of the truss and kept the hernia definitely under control. The paraffin injections have also proved useful in operations on the joints to prevent ankylosis, as the unabsorbable substance interposed between the articulating parts, prevents their growing together. Gersuny added a disinfectant to the paraffin for these cases, and after the joint had completely healed he removed most of the paraffin by puncture. In a case of resection of the upper maxillary bone, a violent neuralgia appeared in the domain of the trigeminus, requiring resection of a portion of the second branch. In order to prevent the regeneration of the nerve, 2 c.c. of the paraffin were injected. The patient has been completely cured since. In the balance of the thirty cases, the paraffin was injected to cure deformities, usually of the nose consecutive to syphilis or trauma. In another patient the paraffin was injected to remedy a defect in the cheek from an operation, first detaching the parts from the bone beneath. The paraffin was also injected in a case of extensive pitting from smallpox. Gersuny injected for this purpose a mixture of four parts olive oil to one part of the paraffin. This caused the tissues to swell, but after the olive oil had been absorbed, the cicatrix was left level with

the surrounding skin, from which it was distinguished only by its smoothness. A young girl was injected with 65 c.c. of paraffin to remedy the cicatricial retraction of the thorax left after resection of several ribs on account of an empyema. The cosmetic results have been most satisfactory in every case. There have been no inconveniences of any kind and the results persist indefinitely the same as at first. The technique which Gersuny follows and which he claims is the only safe method as determined by his experiences in the clinic and by experimental research conducted under his direction, is as follows: The paraffin or unguentum paraffini must have a melting point between 36 and 40 C. This is a soft salve at the temperature of the room and is nearly fluid at that of the body. This soft, yielding body does not irritate the tissues but usually heals in place without reaction and can be palpated as a doughy mass at first, gradually growing harder, until after two months it feels cartilaginous from the proliferation through it and the encapsulation by connective tissue. Intense edema appears after injections in the scrotum or eyelids. In one case some of the vaseline had to be removed on this account. The vaseline is heated to boiling and then cooled by standing the dish in cold water. The syringe is filled while it is still warm and fluid, but it is not injected until it has cooled to the temperature of the room when it emerges like a worm from the point of the fine needle. Embolism from vaseline of this consistency seems to be impossible as there is no absorption as of a fluid. In loose tissue the vaseline must be protected from pressure and muscular movements to keep it at the desired point. In compact tissue a place must be made for it by a previous infiltration anesthesia and only a small amount should be injected at a time. In injecting paraffin to correct a deformity in the nose, Gersuny inserts the needle from the bridge of the nose down to the tip and injects the paraffin as he gradually withdraws it. When the entire framework of the nose is destroyed, the paraffin must be injected also under the alæ nasi. In injecting cicatricial tissue, if the needle is inserted too close to the surface a visible reaction follows and the parts become red for three or four weeks. The exact melting-point is determined by coating the bulb of a thermometer with the vaseline and then placing the thermometer in water gradually heated. After it melts and floats on the surface of the water the temperature of the cooling water should be noted when the transparent drops become opaque once more.—*Jour. Amer. Med. Asso.*

The Canadian Practitioner and Review.

VOL. XXVI.

TORONTO, DECEMBER, 1901.

NO. 12.

Original Communications.

PRESIDENT'S ADDRESS—"THE PASSING OF THE SURGEON" IN TORONTO.*

BY F. N. G. STARR, M.B., TORONTO,

Associate Professor of Clinical Surgery, Demonstrator of Anatomy, University of Toronto, etc.

Gentlemen of the Toronto Medical Society:

Since your courteous and self-sacrificing natures have put me in the President's chair, it would ill befit the present occasion if I did not most heartily thank you for the honor—for honor I esteem it—conferred upon so humble a member of our fraternity in placing me as you did in this unsought-for position.

Were I to give a history of the medical profession in Toronto I fear that my prolixity would weary you. I therefore shall try to give you a few pen pictures of "The Passing of the Surgeon," describing, with as much brevity as the occasion will permit, some of the men who attained to a degree of prominence in surgery in Toronto—and see if we may not learn some lessons from a study of their lives. "Lest we forget; lest we forget!"

It will be interesting to you to know that the profession in this city has always been held in high esteem, and deservedly so. As far back as 1850 Clarke Gamble writes: "My opportunities of forming a correct opinion of the medical confraternity during the period referred to are, in consequence of my position very good, nay, excellent; and I can bear clear unequivocal testimony to them as a class. And I assert that nowhere could be found a better educated, more skilful, kind,

*President's address at the opening meeting of the Toronto Medical Society,
October 3rd, 1901.

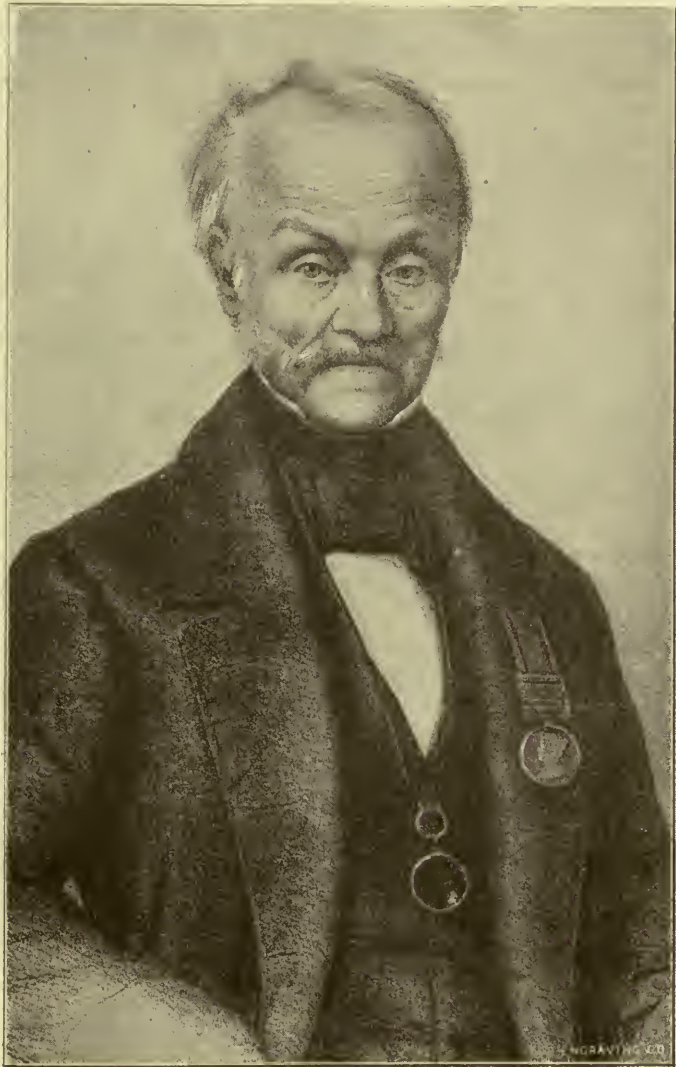
courteous and attentive set of medical men than our community has been blessed with from 1820 to the present time."

From my perusal of a number of works I have learned that medical men rarely become rich in this world's goods; but if one may judge from the records of the historian of their kindness to the poor, many are now reaping rich rewards at the hands of the great Paymaster.

Many of the men of the past were well cultured, with clear intellects, and of good social standing. Surely we might emulate them in this, for too often in these latter days, with the rush and bustle of a busy life, we neglect the social amenities. If one would but remember that many a boy takes his family doctor as his model, surely he should endeavor to be a model worthy the copy. Many were military men, and a goodly number followed politics as a pastime. Many of them, too, had what Napoleon aptly calls "The two o'clock in the morning courage," for some have even laid down their lives for their patients. I refer particularly to the late Dr. George R. Grasset, uncle of Dr. Fred. Grasset, and to Dr. Hamilton, who contracted typhus during the epidemic of 1847, and who were laid in the martyr's grave.

I have found here and there on the historic pages accounts of some who advertised freely, lauding their personal talents in the public press of the day. I may say, so far as I can learn, that these men never attained eminence. The giants of the profession in the past did not herald through the public press every trivial operation performed.

It seems befitting that this chronicle should begin with a brief account of Dr. James MacAulay, as his association with Upper Canada began with Colonel Simcoe, its first Governor in 1792. He was a native of Scotland, born in 1759, and held the degrees of M.D. and M.R.C.S. (Eng.), and died at York (now Toronto) January 1st, 1822. He was senior member of the Medical Board of Upper Canada, organized in 1819; was surgeon to the 33rd Regiment, and afterward to the Queen's Rangers, Simcoe's own battalion; subsequently he was made Deputy Inspector-General of Hospitals. Some time between 1794 and 1796 he moved to York (now Toronto). His name appears first on the list of Commissioners to oversee the opening of Yonge Street, and in 1803 he was one of a "committee appointed to proceed with the work of building" a church. He received a patent for a park lot extending from Yonge Street to University, and from Queen to College. Near the south-east corner some lots were laid out and buildings erected, and this part became known as Macaulay Town, the western boundary of York extending then only to George Street. It may be interesting to mention that James Street gets its name



DR. CHRISTOPHER WIDMER.

from his Christian name, and Elizabeth Street from that of his wife. The homestead was situated where "Trinity Square" now is, and was known as "Teraulay Cottage." The name was formed from the last syllable of his wife's name, Hayter, and from the last two of his own. Teraulay Street doubtless commemorates this romantic name. He was a man of striking appearance, of medium height and fair complexion. Though not actively engaged in practice after the severance of his connection with the army, he did much for the welfare of the medical profession in those early days.

Grant Powell was born in Norwich, England, 1779, and died at York (now Toronto) in 1838. His father was William Dammer Powell, who afterwards became Chief Justice of Upper Canada, and who presided at the celebrated trial at Niagara, immediately preceding the rebellion of 1837. The subject of our sketch was a "Guy's" man. He practised in New York State from 1804 to 1807, and then removed to Montreal, where he remained until 1812, when he came to York (now Toronto) as surgeon to the Incorporated Militia. Though a surgeon of no mean ability he virtually retired from active practice when Dr. Widmer settled here. He was one of the early members of the old Upper Canada Medical Board. His son, Grant Powell, is still living in good health at the age of 82. His grandson, our mutual friend, Dr. R. W. Powell, of Ottawa, is the only descendant who followed the profession of medicine.

Christopher Widmer, M.D., F.R.C.S. (Eng.), was born in England about 1780, and died at Toronto, May 2nd, 1858. He served during the Peninsular war as surgeon to the 14th Light Dragoons, and came to Canada with his regiment during the war of 1812. Settling in York (now Toronto) about 1815, he took up his residence on Ontario Street, between King and Front Streets. Widmer's name will go down to posterity as the father of surgery in Upper Canada. "His skill," according to Canniff, "was equal in making a diagnosis in deciding where to operate, and in handling the surgeon's knife or other instrument." According to Clarke Gamble, Widmer and his partner, Deihl, practically had the whole practice of York and its neighborhood for many years. He was ever a regular attendant at the hospital, and always had a large following of students who held him in high esteem while laughing at his brusque ways and his frequent expletives; while he was ever ready to give his best skill to the poor gratis, yet if he suspected some well-to-do person of trying to obtain his services gratuitously, his language was such that no printing press could bear the strain of reproducing it.

Scadding, in "Toronto of Old," in speaking of him says:



DR. JOHN ROLPH.

"It is to be regretted that Dr. Widmer left behind him no written memorials of his long and varied experience. Before his settlement in York he had been a staff cavalry surgeon, on active service during the campaigns in the Peninsula. A personal narrative of his public life would have been full of interest. But his ambition was content with the homage of his contemporaries, rich and poor, rendered with sincerity to his pre-eminent abilities and inextinguishable zeal as a surgeon and physician. Long after his retirement from general practice he was every day to be seen passing to and from the old hospital on King Street, conveyed in his well-known cabriolet, and guiding with his own hands the reins conducted in through the front window of the vehicle. He had now attained a great age, but his slender form continued erect. The hat was worn jauntily as in other days, and the dress was ever scrupulously exact. The expression of his face in repose was somewhat abstracted and sad, but a quick smile appeared at the recognition of friends. The ordinary engravings of Harvey, the discoverer of the circulation of the blood, recall, in some degree, the countenance of Dr. Widmer."

Peter Deihl was born in Quebec in 1787, and died in Toronto of some internal injury, the result of a fall, on March 5th, 1858. He studied with Dr. Charles Blake, of Montreal, and then went to Europe for post-graduate work, returning to Canada in 1809. From 1813 till the close of the war he served with the Canadian regiment, and returned to England in a transport. In 1818 he came again to Canada, and for the next ten years resided at Montreal, having been connected with the General Hospital there. In 1828 he removed to York (now Toronto), and soon after became a partner of Dr. Widmer. He was a man of a quiet, pleasant manner, gentle disposition, and a good surgeon. Because of ill health the partnership was dissolved in 1835, after which he travelled for a time. Returning a year later he built a residence on Lot Street, near where the Canadian Institute now stands. During the rebellion of 1837 he was surgeon to the 41st Battalion of Militia, under Colonel Hill.

John Rolph was born at Thornbury, England, March 4th, 1793, and died at Mitchell, Ontario, October 19th, 1870. He began practice in York (now Toronto) in 1831, and lived in Macaulay Town, about where the present city hall stands. He became a member of the Medical Board in 1832, was one of Toronto's first aldermen after incorporation and aspired to the mayor's chair, but finding this impossible he resigned to pave the way for William Mackenzie.

In many ways he was a remarkable man. Finding medicine too circumscribed he became a barrister as well, and it is said



DR. WM. CHARLES GWYNNE.

that at one time he turned his attention to divinity and contemplated taking orders.

He was closely associated with Wm. Lyon Mackenzie in the rebellion of 1837, and, warned by the late H. H. Wright, then a pupil of his, after the failure of the attempt to take Toronto, he made his escape to the United States. A reward of £500 was offered for his apprehension. During his exile he practised in Rochester until 1843 when he, with others, was allowed to return. The late Dr. H. H. Wright and Dr. J. H. Richardson were pupils who studied with him in Rochester. In 1848 he started the Toronto School of Medicine, and I have been told by the late Dr. Aikins that he would begin at 8 a.m., and lecture on four different subjects in a morning. In 1853 the School was incorporated, the staff having been increased as the number of students multiplied.

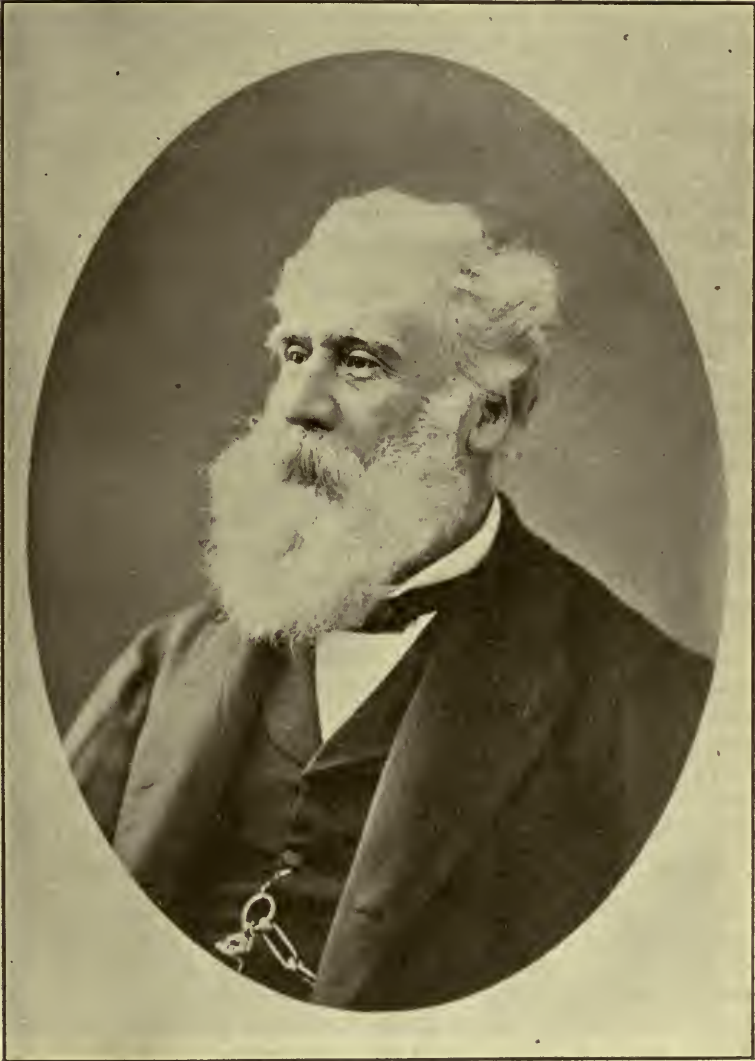
My time prevents me from going further into a description of this remarkable man, more than to quote from Dent that he was a man of "a comprehensive, subtle intellect, high scholastic and professional attainments, a style of eloquence which was at once ornate and logical, a noble and handsome countenance, a voice of silvery sweetness," etc.

William Rawlins Beaumont, M.D., F.R.C.S., (Eng.), was born in Beaumont, St. Marylebone, London, in 1803. He pursued his medical studies at "Barts," and was a dressing pupil of Abernethy. He came to Canada in 1841. In 1843 he was appointed Professor of Surgery in the University of King's College (now University of Toronto), which post he held for ten years until the abolition of the medical faculty, of which he was Dean. He became a member of the Medical Board of Upper Canada in 1845, and took an active interest in the welfare of the profession. In 1870-71 he delivered a course of lectures on "Ophthalmic Surgery" in the Toronto School of Medicine, and clinical lectures at the General Hospital. In 1872 he was elected Professor of Surgery in the medical faculty of Trinity College.

Until the time of Aikins he did practically all the surgery that was to be done, and for many years after the honors were about evenly divided. He was a polished gentleman, an excellent anatomist, and a most finished surgeon, with calm, cool judgment and a delicacy and nicety of operation.

In 1836 he invented and described before the Royal Medico-Chirurgical Society an instrument for passing sutures in deep seated parts,¹ which was greatly admired and was reputed by Tieman, of New York, to have been the origin of the Singer sewing machine. He invented instruments for tying polypi, a sliding iris forceps, a speculum, and a probe-pointed lithotomy knife.

He was the author of essays on the treatment of fractures of



DR. EDWARD MULBERRY HODDER.

the leg and forearm by plaster of Paris (1831), on polypi (1838), a case of a large cartilaginous tumor of the lower jaw (1850), and contributed clinical lectures on Traumatic Carotid Aneurism,² the several forms of Lithotomy³, a deeply penetrating wound of the orbit (5½ inches deep)—Recovery⁴. Papers on "Exostosis of the Scapula," and "Aneurism of the Femoral Artery." He made many contributions to the Royal College of Surgeons, Eng and, and to many other collections.

During the Fenian Raid in 1866 he had charge of the hospital for the wounded at Port Colborne.

In 1865 the sight of the left eye became impaired from acute inflammation, and at length became completely useless; in 1871 the right became affected, and in 1873 he became blind. From then until his death on October 12th, 1875, he lived in retirement with his family about him.

William Charles Gwynne came as a ship-surgeon to Quebec in 1832, and soon after removed to York (now Toronto) where the cholera was then raging. He entered into his work with enthusiasm, and his efforts were oftentimes crowned with success.

He became a member of the Medical Board of Upper Canada in 1838, and always took an active interest in educational affairs. When a student he had learned that blood-letting, then so greatly in vogue, was often unnecessary and even harmful, and as he did not hesitate to express his views, he was oftentimes at loggerheads with his confreres. He was a good diagnostician, a careful surgeon, and when he formed an opinion he held to it with bull-dog tenacity. An instance is related of a young man who in a midnight frolic climbed a lamp-post to put out the light. He fell to the ground and sustained fatal internal injury. At the consultation Gwynne alone contended that he had a ruptured liver and that death would ensue. A *post-mortem* examination verified his diagnosis.

He was instrumental in the formation of the medical faculty in the University of King's College, and in the commission was designated Professor of Anatomy and Physiology. He designed the building for the first medical college in Upper Canada, which was situated to the west of and adjacent to the Parliament buildings on Front Street. He worked hard and faithfully with his pupils, one of whom was Mr. (and afterwards Dr.) Small, who for many years was known as one of the leading physicians of Toronto.

The merging of King's College into Toronto University in 1850, only increased his enthusiasm, but when in 1854 the medical faculty was legislated away, he lost all interest in medicine and left the country, but returned again after two years. He died in September, 1875.



DR. HENRY HOVER WRIGHT.

Edward Mulberry Hodder was born in England in 1810, and died at Toronto, February 20th, 1878. As a boy he entered the navy as a "middy," but remained only a year, when he took up the study of medicine. After qualifying as an M.R.C.S., he went to Paris for two years, and then to Edinburgh. He began practice in London, but soon removed to France. Finally coming to Canada, he settled in Toronto in 1843. The degree of C.M. was conferred upon him by King's College, and that of M.D. by Trinity College in 1845. In 1854 he became a Fellow of the Royal College of Surgeons, of England.

In 1850, he in concert with the late Dr. Bovell, one of Toronto's most eminent physicians, established the Upper Canada School of Medicine, which in the same year became the medical department of Trinity College. Afterwards for many years he was a member of the faculty of the Toronto School of Medicine, but when his old school was again revived in 1870 he was appointed Dean of the Faculty, which post he held until the time of his death. He was on the active staff of the General Hospital and of the Burnside Lying-in Hospital. He was president at different times of the Upper Canada Medical Board, of the Toronto Medico-Chirurgical Society, 1862, of the Canadian Medical Association, 1875, and represented Trinity Medical College on the Medical Council from 1872 till the time of his death.

Though he was devoted to his profession he found time for recreation, and was a lover of sailing. He was, I believe, largely instrumental in the formation of the Royal Canadian Yacht Club. Clarke Gamble, in speaking of him, says: "His name was a household word in Toronto. Skilful, cautious, affable and handsome, he was a universal favorite, particularly with the gentler sex." He was an able surgeon, and is said to have been the first man in Canada to do the operation of ovariectomy.*

An article from his pen on the transfusion of warm milk into the veins of cholera patients has been published.⁵

James Acland De La Hooke came to Toronto in 1839, and received a license from the Medical Board of Upper Canada, being the first to receive its diploma. He afterwards went to Weston, and from there to Goderich, and then to several other places, returning to Toronto in 1870, where he resided until the time of his death, a year or two ago. During his residence on the London Road he operated on an irreducible compound fracture of the femur and of the tibia and fibula by sawing off the projecting ends of the bones which allowed the parts to come into apposition, and a good result ensued. Many amusing anecdotes are told in Canniff's book, but time will not permit of their telling here.

* Dr. Reginald Henwood, of Brantford, Ont., was the first to perform an ovariectomy. Dr. Bovell was some little time after, as was also one in Montreal, by Dr. Trenholme.—Ed.



DR. JAMES H. RICHARDSON.

Henry Hover Wright was born in Prince Edward County, and died in Toronto on the 9th of March, 1899. He began the study of medicine with Dr. Rolph in 1832, and remained with him till Rolph had to leave the country in 1837. Wright followed him to Rochester and remained a little more than a year. Returning to Toronto in 1839 he got his license to practise. For a short time he lived in Dundas, afterwards in Markham, and in 1853 he came to Toronto and became a lecturer in Rolph's School. During his early years Dr. Wright practised surgery as well as medicine, and had the reputation of doing good work. When, however, he and Aikins became closely associated in the Toronto School of Medicine, after the split with Rolph, Wright stuck more closely to medicine and Aikins to surgery. We younger men, of course, remember him as a physician, and affectionately recall him as our old teacher, while some of the older men tell us of the operations done in his earlier days. Dr. Wright did much to elevate the standard of the medical profession, and was noted for his honest endeavors and for his tenacity of purpose.

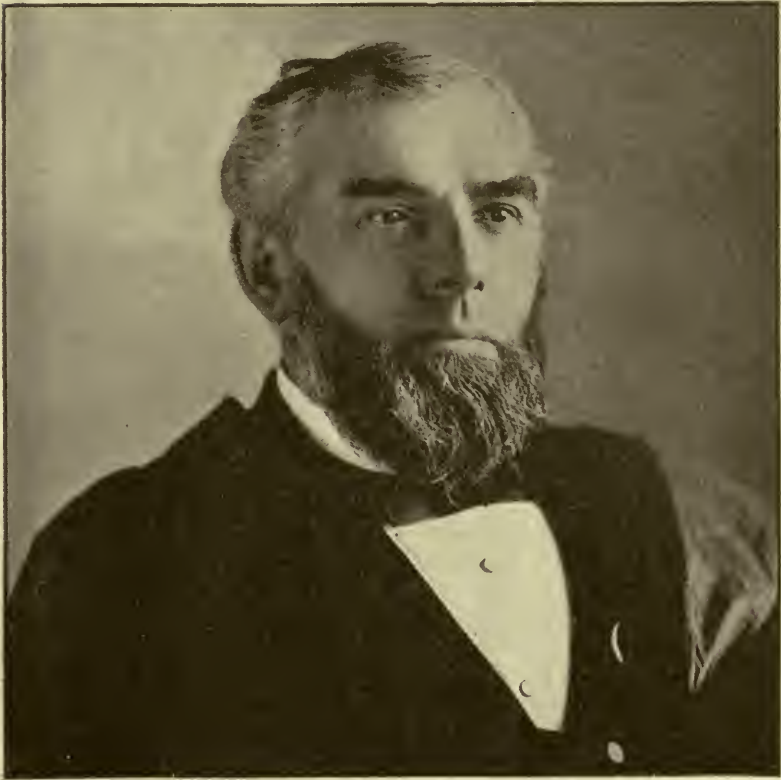
I have met many of his old patients, both in and outside of the city, and one and all bear testimony to his kindness, courtesy and self-sacrifice.

His son, Dr. Frederick H. Wright, followed in his father's profession, graduating in 1872 from the University of Toronto, after which he studied at St. Thomas's, where he was a great favorite with Dr. Peacock. After taking the English qualification he became resident physician in the Victoria Park Hospital for Diseases of the Chest. He afterwards practised in Toronto and was a most skilful diagnostician. His health failed, and he died April 19th, 1882.

Cornelius James Philbrick was born in Colchester, England, in 1816, and died at Toronto, December 2nd, 1885. His medical studies he pursued in London, Dublin and Edinburgh. He was a Fellow of the Royal College of Surgeons of England, and came to Toronto about 1850, settling in what was then known as Yorkville, and residing at the corner of Church and Bloor Streets. He was an able, clever surgeon, and had an accurate knowledge of anatomy. He had many little eccentricities that afforded both his friends and enemies alike many a laugh. In 1852 he was Professor of Surgery in Trinity College. To quote from Canniff's book, "A marble slab covers his grave on which are inscribed the date of his death, and these words, 'Having practised his profession in this city with credit and distinction thirty-four years,' and near the foot set in the marble, is the door plate with the words, 'Mr. Philbrick, Surgeon.'"

Norman Bethune, M.D. (Edin.), M.R.C.S. (Eng.), F.R.C.S.

(Edin.), was born at Moose Factory, Hudson's Bay, in 1822, and was the son of Angus Norman Bethune, who, for fifty years, was in the employ of the North-West and Hudson Bay companies; he died at Toronto, October 12th, 1892. He entered King's College (now University of Toronto) in 1843. Afterward he took post-graduate work at "Guy's," and at King's College, London. Returning to Toronto in 1849, he began practice.



DR. WM. THOMAS AIKINS.

For years he was a Professor in Trinity Medical College. Bethune was an athletic-looking, well-built man, a perfect gentleman, a finished scholar, a polished surgeon, and an amateur artist of considerable ability, as the picture now on the screen will demonstrate. The skeleton in the centre is said to represent Widmer, the one to the left King, and the one about to "play the game" is, I think, Herrick.

I am indebted to Dr. O'Reilly for allowing me to have this slide made from a copy in his possession.

William Thomas Aikins was born at Burnhanthorpe, Ontario, in 1827, and died at Toronto, May 24th, 1897. He obtained his medical education at Jefferson, from which college he graduated with high honors, and soon after began practice in Toronto. He became a lecturer in the Rolph School in 1850, and the Toronto School of Medicine in 1856. For nearly twenty years he was President of the Toronto School of Medicine, and when in 1887 the University of Toronto took this over as its Medical Faculty, he was made Dean, and deservedly so, for he entered heart and soul into the negotiations, believing that such an arrangement meant much toward the progress of medicine in this Province. He held this position until 1893, when, because of failing health, he found it necessary to relinquish some of his work. In both institutions he held the post of Professor of Surgery, and was looked upon as one of the ablest surgeons on this continent. As a teacher of the practice of surgery he had few equals, his style was impressive, his advice good, and his methods of teaching practical. Many a graduate has gone into the backwoods places to practise, filled with excellent ideas as to how to deal with surgical emergencies. Associated with him as I was for nearly two years as a student in his office, and "soop" at the old school, I learned to love him as I would a father, and to respect his ability as a surgeon; and as the years rolled on this respect grew and grew. As I remember him he was kind and unselfish: many times in later years have we chatted together, and of one theme he never tired talking, namely, that so many of his old pupils were taking leading places in surgery in this city and Province. Nothing pleased him more than to hear of one of his boys having done some new and difficult operation, as many were then doing, for antiseptic surgery was yet in its infancy, and great things were happening daily.

He took an active part in the formation of the Ontario Medical Council, and was its treasurer from the time of its organization. He was at the inaugural meeting of the Canadian Medical Association in 1867. From 1850 to 1880 he was a surgeon to the Toronto General Hospital. For many years he was Surgeon to the Central Prison.

He devised and used the hoop iron splint for fractures of the humerus^e; he invented a most excellent fracture bed; he devised the idea of using rubber tubing for applying the continuous cold water coil many years before Leiter ever described it; in amputations of the breast and in other operations necessitating the loss of a large quantity of blood, he used the tourniquets on the extremities as "blood savers." These were



DR. LACHLIN MCFARLANE.

applied in such a way that a large amount of blood was stored in the limbs. Some of the advantages claimed were that the patient required less anesthetic, and then when the operation was concluded and the patient suffering from shock, first one limb was freed, then another, until all the blood was again in circulation. The patients recovered more quickly from their anesthetic, and there certainly seemed to be less shock. He never wearied of advocating "elevation" in the treatment of hemorrhage and of inflammation, and was an ardent advocate of a plentiful supply of fresh air in the treatment of all cases. He performed the osteoplastic amputation at the knee-joint, some years before Gritti in 1858 described it, and was the first man in Canada to adopt Lister's views and practise antiseptic surgery. During my time as a student he abandoned the carbolic spray as superfluous. In the carrying out of antiseptic surgery, as you may imagine, he met with much opposition and even with dishonest and underhand treatment, in so far that one man, who shall be nameless—and may he rest in a nameless grave—would go to his cases, after their removal to the ward, and infect the wounds with pus taken from other cases. Unfortunately, Aikins never contributed to the journals, otherwise his name would pass down to posterity as one of the big men of the time. I would linger longer only I fear that I have wearied you already.

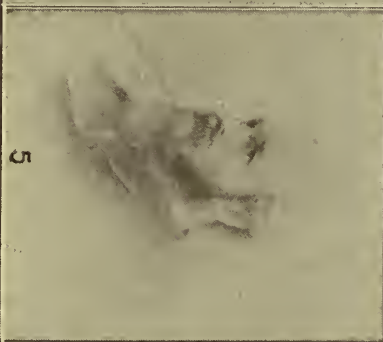
"Yon rising moon that looks for us again—
How oft hereafter will she wax and wane;
How oft hereafter, rising look for us
Through this same garden—but for *one* in vain."

James Ross, the father of Dr. J. F. W. Ross, entered the Toronto School of Medicine in 1848, and obtained his license to practise in 1851. Subsequently he graduated from Jefferson Medical College.

During the civil war in the United States he was appointed surgeon to a corps in the Northern Army, and was present at the battle of Antietam. In 1867, during the Fenian Raid, he was Surgeon to the Toronto Naval Brigade.

For several years he was a member of the Medical Board, from 1875 to 1880 of the Medical Council, and for four years he was a member of the Toronto School Board. He died in 1892 at the age of sixty years.

He was a Demonstrator of Anatomy in Rolph's School. His practice was largely obstetrical, and during his lifetime he attended 6,777 cases of midwifery in private practice. An accurate record of these was kept, and they have since been analyzed and published by his son.⁷ He performed many of the major operations, such as amputations, lithotomy, paracen-



DR. WM. RAWLINS BEAUMONT.
DR. RICHARD ZIMMERMAN.

NORMAN BETTUNE'S SKELETONS
AT PLAY.
DR. JAMES ROSS.

DR. JOHN FULTON.
DR. JOHN B. KENNEDY.

tesis thoracis for empyema, and had considerable experience in the treatment of fractures and of gun-shot wounds.

He was made President of the Canadian Medical Association at Banff in 1889. During his thirty years' practice in Toronto, he was intimately associated with Wright, Aikins and Thorburn, while in his younger days he came in contact with Widmer, Hodder and Small.

Laughlin McFarlane left his father's house at the age of thirteen, and began work as a clerk in a store in the township of Caledon, at the same time preparing himself for teaching. At the age of eighteen he took charge of the school at Caledon. During this time he studied for matriculation and finally entered as a student in the Toronto School of Medicine, graduating from the University of Toronto in 1867, and was one of the medallists in his year. He began practice in Toronto, and after meeting with the usual ups and downs of a city practice, about which some of us know a good deal from sorrowful experience, he became one of the busiest men in town. In 1869 he was appointed a demonstrator of anatomy in the old Toronto School of Medicine. In 1885 I well remember him as senior demonstrator, and I remember, too, how we "Freshies" would quake when "Lockie" would start a "grind" with, "What have we here?" On one occasion we secured the services of an organ-grinder to perform in the dissecting room, and I shall never forget the amused expression on his face, combined with a forced sternness, while he saw that discipline was properly carried out—as well as the organ-grinder and his "hurdy-gurdy." In 1881 he was made visiting surgeon to the General Hospital, and at the reorganization of the Medical Faculty of the University of Toronto in 1887, he was appointed Associate Professor of Clinical Surgery, which post he held until his untimely death from blood-poisoning on February 29th, 1896. He was infected from a needle prick while amputating some gangrenous toes of a charity patient. As I remember him he was a short, stout, thick-set man with a genial presence. Socially, he was "full of fun" and made many warm friends, while by his patients he was held in affectionate esteem. His funeral was one of the largest ever seen in Toronto—rich and poor alike vied with each other in their efforts to tender to his memory their last respects.

John Fulton was born in Elgin County, and came to Toronto to study medicine in the Rolph School, from which he graduated with high honors in the University of Toronto and Victoria College in 1863. After spending some time in post-graduate work in England he returned to Toronto. He then became connected with the Rolph School as Professor of Physiology, and had the same chair in Trinity Medical College till 1880,

when he was appointed Professor of Surgery, which post he held until the date of his death from pneumonia in May, 1887. He was also on the staff of the General Hospital, where he will be remembered by many old students as a most excellent clinical teacher. My recollections of him are that he was a conservative surgeon, and never operated until he was convinced that it was the right thing to do, which is a lesson that some latter-day surgeons might well profit by.

He became connected with the *Canada Lancet* in 1868, and from that time on he was editor and proprietor, conducting the



DR. FREDERICK A. STRANGE.

journal with tact, vigor and ability. At various times he held positions of honor, such as member of the Senate of the University of Toronto, of the Ontario Medical Council, and various positions in the Canadian and Ontario Medical Associations.

John B. Kennedy was born at Bowmanville, or Newcastle, on the 26th of April, 1842, and died in Chicago, December 26th, 1891. It was at Upper Canada he received his early education, and he subsequently obtained his B.A. at Trinity College. After entering medicine he became clinical assistant to Dr. Joseph Workman at the Asylum for Insane in 1863, and

remained there until his graduation in 1867. Soon after this he began practice in Toronto, and was a member of the staff on the old Toronto School of Medicine. Subsequently he became a lecturer in Trinity Medical College. He was surgeon to the Toronto, Grey and Bruce and the Grand Trunk railways, and to the Royal Engineers, and was on the staff of the General Hospital.

Kennedy at one time did an enormous amount of surgery. At this time he was a brilliant and fearless operator, popular with the students, loved by his patients, and respected by his friends.

Frederick W. Strange came to Canada from England in 1869, and began practice in Aurora, where for seven years he enjoyed a very lucrative practice. He removed to Toronto in 1876, and soon had a large practice. He represented North York from 1876 to 1882 in the Dominion Parliament. At one time he was captain of the 12th York Rangers, and afterwards of the Queen's Own, and for many years before his death was surgeon to "C" Company, in which capacity he served during the North-West rebellion of 1885.

He was for a number of years surgeon to the General Hospital, and did a large general practice. We all remember Strange as a man of prepossessing appearance and a fine physique.

Upon looking back on the old days one cannot but regret that a man of such evident ability did practically nothing for the advancement of surgery in this country. He died suddenly, June 5th, 1897, and was buried with military honors, regretted by many of his old patients and friends.

Richard Zimmerman, M.D., M.R.C.S., was born at Clifton in 1851. "Dick," as he was familiarly called by his associates, entered the Toronto School of Medicine in 1868, and took the annual examinations in the University of Toronto, at each of which his name headed the lists in every subject, and at the end of his course he was awarded the University and the Starr gold medals. He went to England, and was soon after appointed resident at St. Thomas's Hospital. Returning to Toronto in 1874, he commenced practice with very bright prospects. He was made demonstrator of Normal and Pathological Histology in the old Toronto School, and pathologist to the Toronto General Hospital. He was a surgeon of no mean repute, and a brilliant career was prophesied for him, but it was not to be, and he was cut off in the very prime of life in February, 1888. Prof. Osler, of Baltimore, in writing to Toronto after his death, speaks of him thus: "So poor old Dick is dead—'peace to his ashes'! He was a good, kind friend, one of my earliest; for it is close upon twenty years since we entered the Toronto School of Medicine together."

To Dr. William Canniff's "Medical Profession in Canada," from which I have quoted freely; Dr. H. Scadding's "Toronto of Old," to old files of the *Canadian Journal of Science*, the *Canada Lancet*, *Canadian Practitioner*, *Canadian Journal of Medicine and Surgery*, the *Canadian Medical Review*; to the friends and relations of some of the men of the past; to Dr. Uzziel Ogden, and especially to our beloved friend, Dr. J. H. Richardson, of whom may it be many, many years yet ere the chronicler has an opportunity of writing his life, I am deeply indebted for assistance in preparing this somewhat lengthy account of the surgeons of the past in Toronto. Of Dr. Richardson I could say so many complimentary things that I know he would blush to hear them. He is an excellent anatomist, a skilled surgeon, loved by his old students, and respected by his friends, as he travels toward the goal, reaping the rich rewards of a well-spent life.

In the study of the lives of these men I have been reminded of the farewell greeting of the great London consultant, to William MacLure: "Give's another shake of your hand, MacLure; I am proud to have met you; you are an honor to our profession."

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1. *Lancet*, March 17, 1866.
2. *Ibid.* 1854.
3. *Ibid.* 1857.
4. *Ibid.* 1862.
5. *Practitioner*, July, 1873.
6. Peters, *British Medical Journal*, June 5, 1897.
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VALUE OF EXAMINATIONS OF THROAT-SWABS AS A TEST OF FREEDOM FROM DIPHTHERIA.*

By JOHN A. AMYOT, M.B.

Diphtheria is the manifestation of the reaction of the tissues to the toxins of the diphtheria bacillus. These toxins are developed by the bacilli during their life history. They can be produced outside of the living body in proper culture media. Within limits more toxin is produced the more oxygen is supplied. Other circumstances have like effect. These toxins can be separated from the bacilli and produce symptoms like those produced when the bacilli were present in the tissues, except we have the case under control when injecting the toxins alone. At the same time that these toxins are reacting in the tissues antitoxins are being produced. When this substance is produced in sufficient quantity to neutralize all the toxin that has gotten access to the body, the disease comes to an end. But in some cases before this neutralization has taken place, so much toxin has been produced, and has acted so deleteriously on the tissues that the patient dies. The tissues of the important organs have been so damaged that their protoplasm has been so changed to something else that life cannot go on. In the treatment of this disease by the use of antitoxins, when its use has been long delayed, we often come on the scene when too late. Irreparable damage has been done. We may neutralize the poison there; but in spite of this last the case is fatal, too much protoplasm has been changed into something else. Therefore the necessity of commencing at the earliest possible time with the treatment.

Of people living in cities and ordinary communities, and looked on as being in good health, about 1 per cent. probably have the bacilli of diphtheria in their throats. This percentage has been gotten as the result of examinations made under the direction of a committee of the Massachusetts Association of Boards of Health. They have asked the co-operation of bacteriologists in various parts of the United States and Canada. The examinations were to be made from the throats and noses of people not exposed to diphtheria and in the ordinary acceptance in good health, and to be taken from as many varying sources as possible. So far over 6,000 cultures have been reported, and out of these about 1 per cent. show the presence of the diphtheria bacilli.

* Read at the Executive Health Officers' Association, Brantford, June, 1901.

Dr. Hill, of Boston, examined a series of people who were in good health, but who had been in contact in one way or another with diphtheria patients; in other words, they were exposed people, and these showed 14 per cent. to have the diphtheria bacilli present in their throats.

Diphtheria bacilli do not at all times produce toxins. Conditions are not always identical for them. Very little variation in circumstances will make an at present non-toxin-producing bacillus a virulent toxin producer. Again we have in us a something that hinders or renders inert the activity of the toxins of bacteria generally. There is no exception in the diphtheria bacillus. The animal body can neutralize the toxins to an extent and can kill the bacilli to an extent also. No disease is produced, or rather no symptoms are manifested, until this barrier has been broken down. "The disease diphtheria is there only when," as Hill has clearly expressed it, "the body shows a reaction to toxins formed by the diphtheria bacillus," after giving the definition of any specific bacterial disease "as the reaction of the body to that portion of the specific bacterial toxins which the body fails to neutralize or eliminate."

The bacilli that are doing no apparent harm to the individual carrying them may easily do a good deal when they get more favorable ground in another subject. But in the great majority of cases we are as medical health men quite helpless with these so-called well people harboring diphtheria bacilli. But things are different with reference to convalescents from diphtheria. These cases are more or less under the control of some medical official. There are two ways of controlling their infectiveness to the general public. One is to isolate them for a stated time. The other is to release when they are free of the bacilli of diphtheria. Thirty days is the time, taking an average, that it has been the custom to hold the infected subject in quarantine. Now it has been shown by bacteriological examinations extending over thousands of cases, that some are free in ten days, some in fifteen or twenty days, and some are still not free from them even after seventy or even eighty days. One case in Copenhagen showed them continuously present for two whole years. From this it can be easily seen that those free, and they are a large percentage, before thirty days are subject to a real hardship as to time—this confinement hindering their proper convalescence, when freedom and what this can give is so important in recuperation. It has been found again that after the thirty days about 30 per cent. of the cases still harbor the bacilli. These though carry bacilli that in all probability, and we are not so sure of this, are not harmful to the subject carrying them, are in a great many cases, especially in children returning to school, using common drinking cups,

trading gum and sharing each other's apple treats, etc., decidedly dangerous to those about them. These, even though not virulent, may from changed environment prove so, on new ground. The thirty-day quarantine is too short for this 30 per cent. in the interest of public health, and is too long in the interest of the great majority of the other 70 per cent. of the cases. Some other method is clearly indicated. If we are dealing with the individual, if his throat is clear and in a healthy condition, then let him go.

A test for the virulence of the organisms has been suggested. This has its disadvantage. First, at the time of making the test, and this takes at least ten or twelve days. From the time of taking the organism from the throat to the completion of the test in the experimental animal, the organisms remaining have had plenty of time to redevelop virulence, and even if it did not it might on being presented to a new individual. Again, the guinea-pig, which is used in these experiments, is not a human animal, and judging from analogy between different animals this is dangerous ground to tread. The difficulties and the uncertainties are too great to make it of much value.

There is left for us, it would seem, the absence of the bacilli only to feel safe from. And here we have difficulties too. The most important one is the difficulty of being sure that we have a true sample on our swab of the bacilli in the throat, or from the point of lesion, of the patient. When well-taken swabs have been obtained at one hour intervals from throats, it has been found that some of them did not show the bacilli, whilst the great majority of them did. Dr. H. Winslow Hill has found from the examinations of thousands of cases that about 30 per cent. of the cases showing a negative result on the first examination still harbored the bacilli of diphtheria. And they have adopted in Boston, and a number of other boards of health have fallen into line, the regulation of requiring that the patient show a negative result on two consecutive days, when as small a percentage as 0.5 only then are let go still with bacilli. The other difficulty that presents here is the great number of varieties that the bacillus of diphtheria shows as found clinically. Dr. Westbrook's valuable work, extending over some years, and covering thousands of cases as well, has demonstrated nineteen varieties, and to these might be added the twentieth in the shape of a branching form as pointed out by Hill. Sometimes one, sometimes two, sometimes even ten of these are found in a single clinical case. In pure cultures of one variety others are frequently found to appear. When separated out their virulence varies, the larger forms showing the greatest virulence, the smaller ones the least to no virulence at all. Clinical cases are often observed to commence with the large ones, and to end

with the smaller. Much work yet remains to be done in reference to these. For the time being our safest plan is to look on all of them as virulent, or, if not virulent, capable of developing virulence and thus doing harm, and to keep in quarantine all cases showing any of them.

The average time of isolation where this plan has been adopted has been twenty-five days, thus saving on the whole five days on the old plan, besides letting those out in ten days that show absence in that time, and keeping those in seventy days who do not show it until then. Justice to all and the greatest possible safety at our command to the general public results.

THE TREATMENT OF ABSCESES IN TUBERCULAR BONE LESIONS.

By CLARENCE L. STARR, M.D., TORONTO,

Orthopedic Surgeon Hospital for Sick Children ; Demonstrator of Clinical Surgery, Toronto University ; Registrar Toronto General Hospital.

It is now ten years since the Society has discussed the treatment of the so-called abscesses in connection with tuberculous lesions of bone. A careful perusal of the discussion which took place at that time does not leave any clear conception of the plan of treatment most likely to prove efficient, as numerous methods are advocated by different men. It is with a view of getting a more recent and, if possible, a unanimous expression of the Society, for the benefit not only of the members of the Society, but also for the students who look upon the transactions as an authority, that this paper is presented.

It is within comparatively recent years that the nature of the cold or chronic abscess has been accurately known. The condition might possibly more properly be called a tuberculous cyst than an abscess, as there are none of the cardinal points of inflammation present except the swelling.

In the commencement, a tuberculous nodule forms in the soft part adjacent to the bone lesion from an extension of the tuberculous process. After infection, these soft parts go through the same process of caseation and liquefaction that takes place in the bone. Thus a cavity is formed with liquid contents and a distinct wall, which has been long recognized as the pyogenic membrane. The wall is the most important part, as in it, in the outer part, are contained bacilli and the resulting grey tuberculous nodules. The inner portion of the wall is in process of

disintegration and, like the contents of the cavity, is comparatively inert, containing few, if any, bacilli. The growth of the abscess is in the line of least resistance and this being in the connective tissue structures, vessels and nerves or any fibrous structures are rarely attacked. The abscess burrows, by the weight of its contents, downwards, infecting the soft tissues as it goes, and thus carries the tuberculous disease into distant parts, rendering the treatment of the diseased soft tissues harder than that of the original focus. In order successfully to get rid of the infection it is seen to be necessary to clear out the wall of the abscess, which contains the possibility of re-infection, as well as to evacuate the liquid contents. The various plans of treatment, as outlined in the discussion of the Society and seen in most text books, may be classified under the following heads:

1. To leave abscesses alone—the so-called expectant treatment.
2. Aspiration.
3. Aspiration with injection of antiseptics.
4. Incision with drainage.
5. Excision.

When the diseased bone from which an abscess originates is properly protected and put at rest, absorption of the fluid contents does sometimes take place, leaving a caseous mass with a fibrous capsule which may ultimately become entirely fibrous or calcareous, and result in cure. One undoubtedly finds cases in which it is the part of wisdom not to interfere in a radical way. Such might be a deep-seated abscess of the spine that is giving no symptoms, and others which with proper supporting treatment are diminishing in size. One may delay operative treatment also to get a more favorable point of exit, it being perfectly right to allow a psoas abscess to work down the thigh so as to open it away from the groin, and thus run less risk of infection. Under no circumstances should an abscess be left when the skin is becoming reddened from tuberculous infiltration, as it will refuse to heal if incised, and will ultimately break down unless completely excised.

Aspiration can serve no good purpose in the treatment of abscesses, as only the fluid contents which are comparatively inert, can be withdrawn, and that only with a good deal of patience and dexterity to prevent plugging of the needle with caseous material. The wall is still left to continue the formation of the pus and the infiltration of further soft tissues, and there is grave danger of the tract of the needle becoming infected with tubercle and a sinus result.

Injection with antiseptics after aspiration is open to the same objection, as one cannot hope to inject a sufficiently strong antiseptic to destroy the wall without getting serious constitutional disturbances.

The common reply one gets from a student to the question as to treatment is to "*incise and drain.*" This, to my mind, is a most dangerous doctrine, and yet it is the most prominent in nearly all text books, even on orthopedic surgery. We all remember the long months, and sometimes years, of treatment of discharging sinuses due in large measure, the writer thinks, to drainage tubes. If it were possible to open an abscess in a good location to drain well, under strict aseptic precautions, and have it drained and dressed carefully for a considerable time, one might possibly expect a cure, but it may be safely said that scarcely a single case of tuberculous abscess opened and drained with tubes escapes infection with true pyogenic organisms, the streptococci or staphylococci. A child thus infected is infinitely worse than before, and in cases of psoas abscess runs extreme risk of septicemia and death. So I think I am safe in making a positive statement, at least I so infer from my experience, that it is never wise to incise and drain an abscess except in urgent cases, such as when in spinal abscess dyspnea is present from pressure on the vagus or bronchi, or other pressure symptoms, require immediate relief.

The method advocated by Dr. Watson Cheyne, of complete excision of an abscess wall and contents entire, is theoretically all that could be desired, but practically its application is limited to certain locations. It can only rarely be used in spinal abscesses, but may be most useful in some abscesses of the thigh.

The most practical and the most successful method in the hands of the writer has been that of *free incision*, multiple if necessary, with careful scraping of the wall of the abscess with a spoon and complete closure of the wound or wounds.

The incision should be as free as possible, the wall scraped carefully and systematically around all sides, as one would scrape a uterus for disease of the endometrium. If any vessels or nerves are near that might be injured, that portion of the wall may be efficiently curetted with a swab of iodoform gauze on an artery clamp.

One might expect a general infection following such an operation, but if the incision is free so as to allow the escape of all *debris*, and a flushing spoon used, such as devised by Barker, with sterilized water or weak sublimate solution, no infection is likely to take place.

After as thorough a scraping of the wall as is possible, the whole cavity may be swabbed out with pure carbolic acid, followed by alcohol, to destroy any remaining bacilli or tubercles.

The incision may be then completely closed, and a firm dressing applied. In nearly all cases there is primary union, the walls becoming glued together, thus obliterating the cavity.

A. H. Tubby, in a recent number of the *British Medical Journal* in advocacy of the open method of treatment of spinal abscesses recommends the flushing of the cavity with sterilized water, followed by a solution of menthol as used by Robert Jones, the formula being: menthol, one drachm; rectified spirit, one ounce; glycerine, eight ounces. This should, according to Tubby, be rubbed into the edges of the incision to prevent infection of skin and subcutaneous tissue. The method has proved most successful in my hands, and in the hands of some of my colleagues in the Hospital for Sick Children. All of my cases, some twenty-five in number, during the past year have been treated in this way, with very satisfactory results. If the bone lesion from which the abscess originated is still active and the tissue still being broken down, of course the abscess will recur, but the same operation may be repeated several times if necessary, and in my experience, will ultimately succeed. Thus you never have at any time foul discharges about the patient, you have no continued dressing, and small risk of septic infection and amyloid disease.

In the course of treatment of the wall of the abscess, wherever possible the bony focus should be sought for, scraped, and any sequestra removed. It does not necessarily follow that because all the tuberculous wall is not removed that the operation will be a failure. We know the recuperative power of nature, and if we remove the bulk of the diseased tissue the phagocytic power of the leucocytes will clear up the balance. This should not deter one, however, from removing as much tuberculous material as possible.

This plan of treatment is applicable in a general way to abscesses in any location, but a word or two may be said about the treatment of special cases.

In the cervical region abscesses should not be opened by way of the pharynx, unless urgent dyspnea is present, on account of the possibility of mixed infection. All lateral cervical abscesses should be opened in the posterior triangle immediately behind the sterno-mastoid. In the dorsal region above the eleventh vertebra, abscesses may be located in front of the spine, displacing the aorta and esophagus, or making pressure on the vagus or bronchi. These may rupture into the lungs or pleura or may work out between the ribs, or may pass down through the diaphragm. Those in front of the spine may be treated by expectant plan if symptoms are not urgent, but if interference is necessary a portion of rib and transverse process must be excised, and the abscess evacuated in this way. Abscesses in the last dorsal or lumbar vertebræ will follow the sheath of the psoas muscle and rupture the sheath just above or below Poupart's ligament, filling the iliac fossa and burrow-

ing down into the thigh or up above the crest of the ilium into the lumbar region.

The treatment should be by free incision, multiple if necessary, as far away from the groin as possible, with scraping of the wall, care being taken to avoid the posterior wall where the iliac vessels are situated, afterwards swabbing with iodoform gauze. It may be necessary to make an opening in the lumbar region as well, to entirely evacuate the cavity. A strand of gauze can be carried between the two openings and the cavity thoroughly cleaned in this way, afterwards closing both wounds.

Society Reports.

TORONTO PATHOLOGICAL SOCIETY.

Minutes of Meeting of October 26th, 1901.

The President, Dr. Rudolf, took the chair at 8.30 p.m. The minutes of the last meeting were read and confirmed.

PRESIDENT'S ADDRESS.

GENTLEMEN,—It is a time-honored custom of societies such as this that the President should, on first assuming his duties, give an address. The knowledge of this fact did much to mar the pleasure which I felt when last spring you did me the great, and to me quite unexpected, honor of electing me to this chair. A strong sense of my unworthiness for the position weighed, and still weighs, heavily upon me, and this is increased when I think of the men who have preceded me here, and of others who could do so much better than I.

But the fact remains that I am your President for the current session, and it is a great comfort to me that we have such a strong list of office-bearers associated with me, and I hope that with their assistance, and with that of every member of the Society, the work of this session will in quality quite equal or even surpass that of any previous one.

By way of becoming acquainted with the previous history of the Society, I have gone through the minutes of the meetings since the Society was organized twelve years ago, and what has struck me most has been the immense amount of good work that has already been accomplished by the members, and of what great service the Society must have been to those who have regularly attended its meetings.

In thinking over possible material for this address my mind passed in review various themes which might prove of interest, *e.g.*, the recent advances in pathology; pathology now as compared to what it was at various previous dates, and so on; but with an audience like this I felt that I would be merely in an indifferent manner repeating what everyone knew. The pathology of the ancients seemed a good subject, and really it is marvellous how many modern discoveries were foreshadowed many centuries ago. Thus Marcus Terentius Varro, the greatest of Roman savants, who lived about a century B.C., mentions "minute creatures invisible to the eye, which penetrate through the mouth and nose into the body, and occasion

diseases of a severe character." What a bacteriologist he would have made if he had not been born so soon! What was the humoral theory of disease, with the treatment of purging and bleeding based on it, but a crude way of expressing the condition of toxemia, about which we talk so much nowadays?

The ancients used to say, when severe fevers broke out amongst their marching armies, that the enemy had poisoned the wells along the route. Their acumen led them correctly to attribute the disease to drinking water; and probably the enemy did frequently poison the wells, although not in the deliberate manner suspected of them.

This subject of ancient pathology was a most entrancing one, but after all not of much help nowadays, except as an antidote to modern conceit, and even if such a dose should be necessary here, far be it from me to administer it on, so to speak, my first visit. Finally, I came to the conclusion that the few minutes at my disposal might be most usefully occupied in discussing the general working of this Society, in seeing whether it would not be possible to make it even more useful than at present.

And first of all a point which strikes me in studying the Minute Book, is the number of by-laws which have been enacted from time to time, which are certainly dead letter laws to us nowadays. For example, By-law XXVIII says that "Any member of the Society who shall be absent for more than two consecutive meetings, without assigning any reason therefor, shall be dropped from the roll." Now, if this rule were enforced nowadays, it would sadly thin our list of members. Certainly the punishment does not fit the crime. Again, By-law XIV as amended in June, 1890, reads that "The regular meetings of the Society shall be held on the last Saturday of the month from September to April inclusive." And yet of the eleven sessions of the Society since then, two have commenced in September, and nine, including the present one, in October. I think that these two examples, and there are many others, suggest that the time has come for a thorough revision of our by-laws, and I would propose that at the end of the session, at the annual meeting, to be held I presume in May, we thoroughly do this work and then have copies of the by-laws printed.

Again, as regards the by-laws, an idea seems to have become prevalent amongst the profession that in order to become eligible for election as a member of the Society, a candidate must present a communication to the Society which must be up to a certain standard—in fact, he pass a species of examination. This idea dates back at least seven years, for I find in the minutes of the meeting held in May, 1894, the following awe-

some note: "The acting secretary was instructed to notify Dr. — that his thesis was awaited by the Council." And what is strange to me is that the dilatory candidate evidently did obey the order, as his name is still on our list of members. I well remember the occasion when Dr. Bingham and I (and I am sure that Dr. Bingham must have an equally vivid recollection of the event) appeared before the bar of this house, so to speak, and read such communications and afterwards sat in nervous suspense while our fate was being decided. We were both elected, fortunately, but imagine our feelings if we had been rejected!

Now, this test, the very thought of which is, I believe, sufficient to keep away many men who would otherwise join us and be valuable additions to the Society, has, as far as I can ascertain, no foundation whatever in the by-laws.

The rules on the point, as amended on June 30th, 1890, and again in 1896, read thus: "Every candidate for membership shall be nominated by at least two members of the Society, and the nominations, made in writing, shall contain a report of the candidate's qualifications and fitness for membership, as well as a report of any research or of any study which he may have pursued in pathology." And again, "Any person who has conducted a research in human or comparative pathology, or who has been engaged in pathological work, or who has promoted the study of pathology, shall be eligible for election." Nothing here about the necessity of reading a preliminary paper before the Society! There are three classes of men who might become members according to the by-laws, but not according to this custom which has somehow or other crept in.

The first are young practitioners who may have shown peculiar aptitude for pathology whilst still students, and hence could fairly be described as having been engaged in pathological work, and yet at the time that they desire to become members, they have no case on hand to work up into the communication at present demanded of them. They thus put off their joining and may never join—at the best they lose the benefit of one or more sessions just when they are best able to appreciate such.

The second class of men are those who have been in practice for years in Toronto, and have given ample proof of their merit by work of a pathological nature presented at other societies or in the journals. Such men are certainly eligible for election under the existing by-laws without their having to present a communication, which they might very naturally object to do if there was the least suspicion of an examination odor about it.

The third class are those men who have done good work elsewhere and came to Toronto as strangers. According to the

by-laws the two members who nominate such a one have only to mention in their nomination the work or study in pathology which the candidate has done, *e.g.*, quote references in journals, etc. We have no right to demand a preliminary communication from him at all, but proceed at once to his election.

The question naturally arises here whether we want a large membership. Is it any advantage to have meetings of fifty or more instead of fifteen or less?

I for one think that the larger our membership is the better for us in every way. A large attendance is a stimulus to good work, and the result would be a more careful preparation of communications.

Further, we would have a larger amount of money at our disposal and hence might be in a position to publish our transactions in full. By-law XXVI states that this should be done annually, and I am sure that if we can manage to do so the work would be a very valuable one.

The idea of enlarging the Society is not a new one. In 1891 the late Dr. Graham (to whose rare energy this Society owes so much) proposed that the meetings should be thrown open to the medical public, who were not, however, to be permitted to take part in the discussions, and we know how much the occasional open meeting held about Xmas time is thus appreciated. But it seems to me that it would be even better to enlarge our membership and then, as I have said, we would become richer. It has been suggested that we do not want members who are not keen on pathological work, but I do not think that any who are not keen on the subject in hand will turn out on winter nights to clog our meetings. No! they will stay at home, but our indefatigable Treasurer will be after them all the same! The Philadelphia Pathological Society consider as eligible for election to their membership all properly qualified medical men, and the London Pathological Society have recently done the same.

When this Society was founded, its avowed object was "the promotion of pathological science," and a better definition of the proper function of such a body could not well have been given.

The London Pathological Society at first limited their members to the showing of specimens with accompanying remarks, and especially barred discussions upon abstract points. A few years ago, however, they found it necessary to alter this law so as to admit of discussions that were valuable although abstract. And surely this was right, if they were to line up to their name! "Pathology," as Dr. Pye Smith said in an address at Reading in 1898, "is not merely morbid anatomy, but the inquiry into the natural history of disease, the relation of cause

and effect in disordered bodily processes, the disturbing action of mechanical agents, of heat and cold, of poisons and parasites in human physiology." A Pathological Society should not, I contend, be merely one of morbid anatomy, but also of morbid physiology.

A woman dies of hysterical anorexia. Surely a careful and concise description (shorn of all unnecessary detail) of her long suffering is a fitting subject for the consideration of a *Pathological Society*. No gross or even histological changes may be found at her death—no morbid anatomy, in other words, although too much morbid physiology. But the very negative result of the *post mortem* examination is of the greatest interest, and far more suggestive to the thoughtful mind of fields yet unexplored than is a "good specimen" of hob-nailed liver shown for its smallness, or a ponderous lipoma shown merely on account of its ponderosity.

"It is a great mistake," writes Dr. J. F. Payne, "to look on all that occurs during life as clinical and only that which is observed after death as pathological."

It seems to me, in fact, that we cannot draw any line between the pathologist and the clinician. Both endeavor to find out where and how the patient deviates from the path of what we call health, but the one conducts his investigations during life while the other begins where the former ceases. They are both studying pathology—"the doctrine of sufferings or diseases."

The clinician is like a person watching a battle, he hears the thunder of the guns, sees the charges of rushing troops of horsemen, and amidst all the whirl and horror and blinding dust finds it hard to say exactly what has happened, whence came the fire that so withered the troops in front of him, what caused the one side at last to give way and take refuge in hasty flight.

The morbid anatomist is the observer who next day comes wandering over the now still scene; he investigates the direction from whence the murderous fire must have come, counts the dead, measures the entrenchments and in every possible way tries from the facts before him to picture the scene of the day before. His description of the battle will be as incomplete and often as erroneous as that of him who watched it. Neither will have a thorough idea of what happened and it will be best if they compare notes, the one explaining one point and the other another, and thus they will arrive at the most perfect knowledge of the battle possible.

If you will kindly pardon this very war-like simile, I think it illustrates the close relationship which should exist between clinical and *post mortem* work. Every case that comes to the

dead-house should have as complete a clinical history as possible, carried right up to the time of death, and then only are we able to appreciate to the full the results of the *sectio*. It is of little or no value for the clinician merely to send his diagnosis, as is done in some places; who cares whether Dr. So-and-so is right or wrong in his opinion of the case? What we want to know is what symptoms and signs existed before death, and then what produced these phenomena. Of course much may be learned from *post mortems* performed on persons of whom there is no clinical history; good collections of rare conditions may thus be accumulated, but such work is on a par with collecting old china or scarce postage stamps, and has a very limited horizon.

And, in passing, I may remind you of how many physical signs may be demonstrated on the cadaver before the knife is taken in hand at all, and these are of great value as they are immediately verified.

When the student of disease constantly sees certain symptoms occurring during life associated with certain *post mortem* findings, then when he comes across these symptoms in his patients he will be able to call up a vivid mental picture of the pathological condition present—in other words he will tend to interpret his clinical facts in terms of morbid anatomy and physiology.

In some teaching centres the professor of pathology is also a clinical teacher, thus welding the two departments. The science of pathology has grown so enormously that such a dual position might not now be advisable, but although one man cannot now combine both branches successfully and yet find time for purely original work in either, let us never cease to remember that the two are parts of a whole.

In studying diseased processes in man the clinician, bearing always in mind his chief function, must disturb the natural course of the processes by treatment, and it follows that where he is most successful he learns least. But a field is open where we can study many conditions of disease undisturbed by this factor, and may at any time find what state really exists. I refer to the department of experimental pathology. In this country, where no anti-vivisection laws exist, we have a free field for this kind of investigation, and I should like to see many more communications of this sort presented here. Those junior members especially, who sometimes complain that they have no cases from which to prepare the two communications which are demanded of them by By-law XXIV, can readily obtain such at the cost of a few dogs, rabbits or guinea-pigs. In these, by mechanical, thermal, chemical, or infective means, they can set up a great variety of diseased conditions of the very greatest interest.

Now, lest I weary you, I will stop, and lest I have been involved I will summarize what I believe (and this belief is shared by all the members of the Executive) will be for the best carrying out of the original object of the Society, "the promotion of Pathological Science."

1. Revise our by-laws up to date and have them printed.
2. Increase our membership by getting as many desirable men as possible to join who are fairly eligible under the existing by-laws.
3. Publish our transactions.
4. Use our influence as a Society in urging a closer connection between clinical and *post mortem* work.
5. Encourage the study of experimental pathology.

And lastly, in the conduct of the many vigorous discussions which I trust we will have during the present session, let us wholly respect truth and reason and largely mistrust authority.

Unusually Large Urinary Calculus.—DR. G. A. PETERS.

The specimen presented is a urinary calculus of unusually large size. Its circumference in the longest diameter is $7\frac{1}{2}$ inches; in the shorter diameter, $5\frac{3}{4}$ inches. It is of a fairly symmetrical oval shape, being slightly larger at one end than the other. Its weight at the time of removal was 6 ounces and 230 grains. After drying, the specimen weighed a little less than 6 ounces.

The host was a farmer, Mr. A., otherwise strong and healthy, aged 39. He had been the subject of symptoms of stone in the bladder from the age of about nine years. At times it produced much pain, but latterly the symptoms had largely subsided, and he really suffered but little. This was explained at the time of operation by the fact that the stone had become partially encysted and thus was immovable in the bladder.

The stone was removed by suprapubic cystotomy on the 1st June, 1901. On opening the bladder the stone was found with its large end upwards and its smaller end embedded to a slight extent in the fundus of the bladder behind the prostate. The wound in the bladder wall was made large enough to remove the stone without very much laceration. After removal the bladder was flushed out and stitched up with two rows of chromicized catgut sutures. The method employed for distending the bladder before operation was that advocated by Greig Smith, and after stitching up the incision the bladder was tested for retentive power by allowing it to become distended through the catheter. A tube surrounded by a layer of gauze was used for drainage down to, but not into, the bladder. The patient had no bad symptoms whatever, and the bladder wound healed by first intention, so that at the end of

ten days there was no leakage whatever. But shortly after this, however, a very small leakage occurred and persisted for a few days, ultimately healing, however, and leaving a good healthy retentive bladder.

On section the stone proves to have been in the first instance an oxalate of lime calculus. There is a nucleus of very firm laminated dark-brown exalate about $\frac{7}{8}$ of an inch in diameter and bounded by a very dark crenated line of the same salt. Outside of this is another layer $\frac{3}{8}$ of an inch in diameter, showing oxalates apparently of very much looser formation, with striæ radiating towards the centre. Had the stone been removed at this time it would undoubtedly, from its appearance, have proved to be a typical mulberry calculus. On the outside of this central oxalate portion is a laminated crust varying from half an inch to an inch in diameter, extending to the circumference and consisting probably of a mixture of urate of ammonium and phosphates. The X-ray photograph of the stone shows these laminæ most markedly, with various spots which are found on section of the stone to be probably due to the more dense phosphatic substance which is found irregularly distributed between the laminæ.

Method of cutting calculi.—The following is an original method of cutting stones of all kinds, hard and soft, which the author has found to be of great use and of equal simplicity:

The stone is first of all dipped for a moment into melted paraffin wax. This gives it a very thin coating of the wax, and prevents the sticking of the plaster-of-Paris in which it is to be embedded. As a means of holding the stone absolutely still while it is being sawn, the aid of a horseshoe, as shown in the accompanying preparation, is brought into use. The horseshoe is placed upon a board with its middle exactly over a line previously drawn longitudinally along the board. This line is to serve as a constant fixed indication of the centre of the stone. The heels of the horseshoe may be tilted up by means of a short board placed crosswise under the shoe, so that they will about subtend the centre of the stone. The horseshoe is then nailed firmly into position on the board. The stone is now taken in the hands of the operator and carefully centralized opposite the line drawn on the board. Plaster-of-Paris cream is then run around it and over it in such a way as to embed the stone completely to the extent of not less than half an inch of covering at any part, and in such a manner that the embedding plaster also embraces the heels of the horseshoe. This is then allowed to set firmly, and if it can be left for several days until it is thoroughly dried so much the better, as it is found that the saw works more easily in thoroughly dry plaster. After sawing the stone directly through the plaster which em-

beds it, a second section is made through the plaster between the stone and the heel of the horseshoe. This section can then be readily lifted out, and the corresponding half of the stone cut or lifted out of the embedding plaster. The removal of the stone from the plaster is facilitated by plunging the whole into hot water for a few moments, when the paraffin wax becomes softened and the stone can be easily lifted out of the plaster. The wax is then melted off by holding under a hot-water tap, or putting it into a basin of hot water for a few moments. The surface of the stone may then be polished rapidly and easily by grinding it on a ground-glass surface. In the case of very hard stones the polishing process is facilitated by using powdered pumice stone or emery. In order to get a good polished surface, the stone should finally be rubbed dry on plain glass, and later on some woollen fabric, which will bring up the polish of the stone.

Dr. Rudolf asked if urate of soda was usually darker in urinary stones, because in senoliths it was white.

Diffuse Hemorrhage into the Meninges of Brain and Spinal Cord, associated with Albuminuria and Glycosuria.—DR. H. B. ANDERSON.

Patient, woman, aged 28, domestic; mistress returning home found her insensible; removed to Grace Hospital, comatose, and died next day without having regained consciousness. *Post mortem* report showed straining on the dependent parts. On right forearm were seen livid spots, some on back of the hand, one below inner condyle. Blood froth in nostrils. Mammæ pendulous. Abdomen prominent with striæ. One para. Goitre fairly marked. On surface of left kidney cysts were found. Uterus contained a fetus of about 3½ months. Hemorrhage diffuse into pia-arachnoid the same in cord through its entire length. Left lateral ventricle contained blood. Bacteriological examination of the blood from the livid spots gave no growth. Urinary analysis—urine removed *p.m.*, sp.gr. 1028, ac. sugar 1 3/7 per cent. acetone, also trace of albumen. Casts granular, hyaline and epithelial. Kidney showed parenchymatous and interstitial nephritis. There was no poison which could produce such profuse hemorrhage. Appears to be due to toxemia.

Discussion—Dr. McPhedran asked if there was any evidence of rupture of blood vessels or of hemorrhage from any small vessels.

Dr. Parsons asked if livid spots looked like clearing up of purpuric spots, or was there a suspicion of scorbutis. What was the condition of the gums?

Dr. J. J. McKenzie asked if capillary hemorrhage was to be considered.

Dr. Peppler asked as to the contents of the stomach and chemical analysis.

Dr. McIlwraith, by invitation of President, took part in the discussion, and asked if there had been any necrotic area in the liver or other organs found.

Dr. Primrose suggested that after injuries hemorrhage does not occur precisely in injured locality. He stated a case in point. Also hemophilia might be cause.

Dr. Fotheringham—Could coma be due to diabetes? uremic? or coma due to hemorrhage only?

Dr. Rudolf asked as to goitre, was it cystic or of vascular variety?

Reply—There was no evidence of ruptured vessels. No suggestion of scurvy. Had never read of such a condition in scurvy or hemophilia. Stomach contained no erosions or ulcers. No external injuries to head suggesting violence. It was too general and the cord was involved. Goitre was cystic. There was a medico-legal inquiry.

Notes on Blood Pigment.—DR. J. J. MCKENZIE.

He said hematoidin had been identified as bilirubin. Hemosiderin was iron holding. In a case of cancerous cachexia, hemosiderin granules were found in the liver. Phosphates were found absent. The extraction of iron by acids took hours, leaving granule present, hence organic accretion remained after the extraction of iron. In a case of brown atrophy of lung, what was called hemosiderin gradually disappeared under extraction by acids, showing a difference in the granule in liver and lung.

Dr. Peppler's Specimen of Cast Ureter Passed Through a Silver Catheter.

Discussion.—Dr. E. E. King asked if a microscopic examination had been made.

Dr. Anderson asked how the formation of the cast in the catheter had been excluded.

Dr. Primrose—Was catheter passed for first time?

Dr. Oldright said cast was as large as a No. 10. And how could it pass through the eye?

Reply.—Under microscope only blood cells were found. For two weeks catheterization had been going on; they were sterilized before using each time, hence it was impossible for it to have formed in catheter. It was a perfectly organized clot.

By invitation, Dr. Hendrick said he had washed the catheter each time, seeing that it flowed freely.

Dr. H. B. Anderson showed his card specimens (a) Ruptured Bladder; (b) Tubercular Bladder.

Members Present.—Drs. Rudolf, Parsons, Anderson, Primrose, Fotheringham, Peters, Pepler, McKenzie, McPhedran, Carveth, Ashton, Fletcher, Reeve, Hamilton, King, Oldright. Visitors—McIlwraith, Bryans, Hendrick, Hooper.

Dr. Rudolf proposed for membership Dr. K. C. McIlwraith, seconded by Dr. E. E. King.

It was moved by Dr. Anderson, seconded by Dr. Reeve, that a vote of thanks of this Society be tendered Dr. Rudolf for his address. Carried.

Dr. Parsons, Vice-President, put the motion and tendered the thanks of the Society to the President, who replied in a few words of thanks.

Cast of Ureter.

Dr. Herman Rieder, of Maine, in his atlas of urinary sediments, speaks of two casts of ureter. 1. Five inches in length; it resembled an ascaris *Limbricoides* in a case of sarcoma of kidney, composed of sarcomatous masses mixed with decolorized blood clots. 2. Shorter, less regular, composed of decolorized blood clots; also a tumor of kidney.

Symptoms.—Renal colic, partial or complete cessation of hematuria, which reappears as soon as pains cease, *i.e.*, as soon as casts reach bladder.

The patient who passed this cast was a man forty years of age, suffering from a form of paralysis resembling spastic paraplegia. During September he developed lobar pneumonia, with temperature of 103.4. Pulse 132; respiration 32. About the sixth or seventh day after onset of the pneumonia the crisis occurred, the temperature dropped to normal and ran along in this manner for about two days, when there was a sudden rise of temperature. During examination of the patient the bladder was found distended, the patient suffering from retention. On using the catheter I withdrew about half a basinful of urine with a very ammoniacal odor, and of a bloody color. Prior to this the patient had no trouble in emptying the bladder. The urine was withdrawn per catheter for about two weeks and bladder irrigated daily. That which came through the catheter at the beginning and end of catheterization looked like pure blood. The urine itself was very ammoniacal and bloody, and contained pus and mucus, blood cells, and bladder epithelium in abundance; neither the pus nor blood was thoroughly mixed through the urine at any time.

The specimen presented this evening was obtained during irrigation of the bladder, it passing through a No. 10 silver catheter. I should mention that it did not pass through the catheter completely of its own accord, but protruded from upper end for about two inches. Stopping the flow of irriga-

tion fluid, I withdrew it carefully and placed it in solution, and found that it was covered with mucus, and was quite soft and elastic. The patient never complained of any symptoms of renal colic. He ultimately died of surgical kidney.

W. H. P.

G. B. H.

TORONTO CLINICAL SOCIETY.

The regular meeting of the Toronto Clinical Society was held in St. George's Hall, Elm Street, Toronto, on the evening of the 6th of November, and in the absence of the President, Dr. J. F. W. Ross, the Vice-President, Dr. Edmund E. King occupied the chair.

The following Fellows were present: Pepler, J. A. Temple, Ryerson, H. B. Anderson, H. J. Hamilton, Peters, Fotheringham, Baines, Small, Mellwraith, Orr, King, Elliott, Bingham, Harrington, Bruce, Boyd, Lehman, Rudolf, Garrett, Nevitt, Oldright, Primrose, Parsons, W. H. B. Aikins, Thistle and Fenton.

Thyroidectomy.—By Drs. GEORGE A. BINGHAM and J. T. FOTHERINGHAM.

This occurred in a female aged thirty years. Several years ago she noticed an enlargement in the thyroid region, to which she paid no attention. Her health then began to fail and she lost flesh from 167 pounds to 120 pounds in four or five years. The eyes were prominent; breathing embarrassed; heart action very rapid. The thyroid gland was enlarged and the whole mass circumscribed. Dr. Bingham advised an operation, which was performed, an oblique incision being made from the left mastoid process to the sternum. The inferior thyroid was tied off close to the tumor and the whole mass removed. Chloroform was only fairly well borne, so normal saline solution was introduced into the rectum during the operation. The cavity was obliterated by several rows of cat-gut sutures, by quilting. Subsequent to operation tachycardia developed with an elevation of temperature—103, pulse 170, respiration 46. The ice pack was used over the precordia with good results. On the eleventh day, pulse, temperature, and respiration became normal. Vocal phonation was lost entirely. Electrical treatment was begun under Dr. Wishart. One night she awoke up suddenly from her sleep and found she could talk. As to her present condition, she has not felt so well in five years. The following points are interesting: One source of danger in the operation is the anesthetic, and if we dispense with general

anesthesia we remove this danger. Another source of worry has been the yawning cavity behind the sternum and cavity. This can be entirely overcome by a careful resort to the method of quilting in these cases. Aphonia is not necessarily pronounced and may result from hysteria and laryngitis. As to post-operative treatment, Dr. Bingham insisted upon the imperative necessity of careful and scientific attention to the patient. He was particularly strongly impressed with the ice pack to the heart, which relieved the patient so quickly.

Dr. Fotheringham: The diagnosis was early made of course, and mainly on five or six points. There was fine tremor of the hands and tongue. Von Graaf's sign was absent. For years she had refused to sleep with enough clothing on, even in winter. She also had flashes of heat characteristic of the climacteric. The knee jerks were very active; and then there was the goitre.

Dr. Anderson stated he had made a microscopical examination of the tumor and it showed a condition of parenchymatous goitre, the thyroid vesicles being extended and filled with thyroid material.

Drs. Boyd, Pepler, Thistle, Oldright, Hamilton, Peters, Nevitt, Bruce and King also spoke on the subject, after which Drs. Bingham and Fotheringham replied.

Temporo-Sphenoidal Abscess.—By DR. HERBERT A. BRUCE.

This case was originally presented to the Society by Dr. Bruce at the May meeting of 1901, and he gave this further report in compliance with a request then made by Dr. Grassett. Dr. Bruce stated that the wound had completely closed; there was no discharge from the ear, and the boy is now in perfect health.

Paget's Disease of the Nipple.

Dr. J. A. Temple presented this specimen and recited the history of the case. Paget's eczema of the nipple is not a very common disease. This was a fresh specimen, Dr. Temple having removed the breast the day before, assisted by Dr. Macdonald. The patient was an unmarried woman of forty-five years of age. A year ago she consulted her physician, presenting to him an excoriated nipple. At that time he examined her very carefully and found no growth in the breast at all. He tried various applications to effect a cure but failed to do so. He did not see the case then for eight or ten months, when she again came under his observation, and he noticed that there was a lump immediately beneath the nipple. This disease is very frequently associated with cancerous deposit in the breast, and Paget pointed out and other writers since that time, that

the cancerous deposit is situated immediately beneath the nipple. In this woman there was a very thin ichorous discharge issuing from the nipple. The history would lead clearly to show that the disease commenced as an ordinary case of Paget's eczema of the nipple which Thin describes now as malignant dermatitis and leads to duct cancer. Dr. Temple removed the entire breast with all of the fatty tissue clean down as far as the pectoral muscle.

Dr. Anderson spoke of the two forms of this disease.

GEORGE ELLIOTT,
Recording Secretary.

SURGICAL HINTS.

In furuncles and carbuncles of the upper lip it is especially important to operate promptly, usually by thorough excision under an anesthetic. The location of the disease, in such cases, makes them peculiarly dangerous owing to the possibility of the occurrence of rapid thrombosis of the facial veins, extending to the cerebral sinuses. This, in turn, is apt to cause fatal pyemia.

In every case of coma, whether from alcohol or any other cause, always investigate the bladder by percussion, in order to find out whether there is a retention of urine. Should this be the case, measures must at once be taken to empty the bladder. If coma is due to nephritic trouble, it must not be forgotten that the fact that no urine has been passed for a long time may be due to suppression instead of retention.—*International Jour. of Surgery.*

Infectiousness of the Clinical Thermometer.

Rosenberger (*Amer. Med.*), by experiments, has shown that simple rinsing and washing of the thermometer after use may not remove from it the usual flora of the oral cavity. Bacteria were found to retain their power of infection for at least two months after the thermometer was used. Thermometers were found to be disinfected by immersion in a 1-2,000 solution corrosive sublimate for two minutes after washing and then permitting them to dry in the air. It is advised, however, that as far as possible each patient should possess a thermometer as sacred to his own use as is his toothbrush. Small amounts of formalin or of carbolic acid poured on cotton and placed in the bottom of the thermometer case were found to be ineffectual.—*International Medical Magazine.*

Editorials.

MEDICAL EDUCATION IN TORONTO.

Lucius S. Oille, B.A. (Tor.), '53, M.A. and M.B. (Tor.), '58, M.D. (Tor.), '59, of St. Catharines, has published a letter in the *Toronto Mail and Empire*, which points out "two deficiencies of the medical status present in Toronto."

1. Absence of provision for polyclinic or post-graduate study.

We are to a certain extent in sympathy with Dr. Oille's opinion, and would like to see further provision for post-graduate study. How are we going to get it? We will leave out of the question, for the present, laboratory work. We have fair facilities for that both for under-graduates and graduates, and expect to have better in the near future. What we want to develop is the clinical teaching. The medical colleges of Toronto are now using all the clinical material at their disposal in every possible way known to medical science. We are using every patient we can get in three hospitals (General, St. Michael's, Children's), and as many as possible in some other institutions, such as the Isolation Hospital, House of Providence, Home for Incurables, Asylum for Insane, etc. How then can we develop anything more in the clinical line? We don't think that our system of medical teaching is yet perfect in Toronto, but we don't at present see how we are going to make any phenomenal jump upwards. It is possible that if something new, which we might call a post-graduate school or a polyclinic, were organized, we might fail to do any better than we are doing now. There is one polyclinic, and one only, in London, England. At the head of it are Mr. Jonathan Hutchinson and many other prominent men. The fee charged is five dollars. When the writer was in London last June, there were twenty-five to thirty Canadian graduates. How many of these were attending the polyclinic? Not one. Why? Because it was "no good." They were attending other hospitals where they had to pay fees of forty to eighty dollars. However, we feel that we ought not to give up the idea of establishing something in the shape of a polyclinic in Toronto, because the teachers of London have failed to make the most of their clinical material.

2. Neglect of original clinical and laboratory research.

We are glad to be able to throw some light on this subject by publishing in this issue a specific statement of a portion of the work of this sort, which has been done in the Medical Faculty of the University of Toronto during the last few years. It required quite an amount of *research* on our part to ascertain that there had been so much original research done by various members of the Faculty. We also publish in the same connection a partial list of graduates who have distinguished themselves in foreign countries.

Dr. Oille in conclusion states that the methods of John Hopkins and McGill may be studied to advantage. We presume from this that he thinks McGill is better than Toronto. We may say that some years ago a fair number of physicians, even west of Toronto, held such an opinion, but we think very few do so now. The success of the Medical Faculty of the University of Toronto during the last few years, furnishes ample evidence of the position she now occupies in Ontario. There are registered this session one hundred and twenty-eight freshmen, and, altogether four hundred students, not including any occasional students. We are pleased to add that the teaching Faculty is at present doing the best work, all things considered, it has done since the reorganization in 1887. We understand that the University authorities do not object to fair criticism in regard to any of the Faculties, but they all regret that one of their own graduates should have published in the lay press such a letter.

CANADIAN MEDICAL PROTECTIVE ASSOCIATION.

At the meeting of the Canadian Medical Association at Ottawa in 1900, a committee was formed to consider the question of the formation of the above association, and to report at the Winnipeg meeting of 1901.

The following abstract of the report of the committee, which was adopted by the Association, explains the objects of this new organization:

We believe it to be in the interests of the medical profession of Canada that an association should be formed by this body for the protection of such members of the medical profession

as may become members of this association, and who may be unjustly prosecuted for malpractice. The object of this association is to protect the members from prosecution where such action appears to our counsel and solicitor, as well as the committee in charge, to be unjust, harassing or frivolous.

The following officers were elected, as recommended in the report: President, Dr. R. W. Powell, Ottawa; Vice-President, Dr. Camarind, Sherbrooke; Secretary, Dr. F. W. McKinnon, Ottawa; Treasurer, Dr. Jas. A. Grant, Jun., Ottawa.

All expenses arising out of such defence shall be paid out of the funds of this association, and the treasurer shall be empowered to pay out of the treasury of this body such sums as may be required to carry on the defence to a final or proper determination upon receipt of an order signed by the president and secretary.

A sum of two dollars and fifty cents shall be levied annually on each member of this Protective Association.

Every member of the profession in good standing in Canada, excepting as hereinafter provided, shall be eligible for membership in this association.

No physician can become a member of this association after having a charge made against him for any offence that may be covered by the rules of this body until after his case has been disposed of.

Upon an action being brought for malpractice against any member of this Protective Association, it shall be competent for the defendant, to communicate the facts to the secretary, who shall thereupon convey the name to the committee, whereupon such committee shall submit the case to the solicitor, who shall decide upon the nature of the defence, if any defence is to be made.

It shall be the duty of the committee to follow the case through any and all courts until a correct judgment shall be obtained, if in the opinion of counsel such a course would be judicious. In no case shall the association compromise.

A meeting of this association shall be held annually at the same time and place as the annual meeting of the Canadian Medical Association.

The new association has absorbed the Medical Defence Union.

OVER NIAGARA FALLS.

From a medical point of view, many interesting questions would naturally arise from an investigation of all the circumstances of the case of the woman who lately went over Niagara Falls, and is still alive. For the present, however, we think it will be as well to leave the matter in the hands of the lay press. We extract the following from an article which appeared in the *Literary Digest*:

"Mrs. Edson Taylor is a teacher of dancing and physical culture. Her successful trip over Niagara arouses various reflections in the minds of editorial writers throughout the country. The *Denver Republic*, for instance, thinks that Mrs. Taylor 'seems to be taking a lot of credit that belongs to the barrel,' and the *Kansas City Journal*, in a similar spirit, remarks that 'if Schoolmarm Mrs. Taylor wants to produce a genuine sensation let her reverse her feat and go over the falls from the bottom.' The *Detroit Journal* finds that Mrs. Taylor's idea holds good in all kinds of careers, especially in politics, and that 'anything can get through with the proper kind of a bar'l.' The *Washington Post* thinks that 'some day Niagara Falls will feel like producing a book on 'The Fools Who Have Gone Over Me.' The *Buffalo Express*, with a characteristic pride in local bits of scenery, speaks regretfully as follows:

"We really wanted the great cataract to remain unassailable, unachievable. It is fine to have something at hand which is absolutely master of itself, superior to everything. We thought we had it in Niagara Falls. And now comes along an estimable person—not a mighty athlete, or a wonderful swimmer, or anything of that sort, but a quiet, rather matronly-fashioned woman—who tucks herself into a barrel and glides over the awful precipice well-nigh as serenely as a decoy duck would bob over a two-foot mill-dam. Could anything—even the impending lectures which the trip has so obviously fitted Mrs. Taylor to deliver—do more to belittle Niagara Falls? The question really becomes serious: Are they any longer worth looking at?

"It is, apparently, an hour in which all the impossible things are getting done. Here is the great aeronaut, Santos-Dumont, flying around Eiffel Tower as blithely as a swallow around a

church spire. Here is this other eminent scientist, P. Bowser-Nissen, charting the bottom of the world's whirliest whirlpool, so that all other navigators in those crowded waters will be able to keep from running aground in midstream. Here is Alexander Winton doing ten miles in his automobile at a rate so close to a mile a minute that we may as well let it go at that. These are all achievements, just as Sam Patch's jumps were achievements. All the world knows how much better the human race has jumped since Sam Patch showed it how; and we shall expect to see a like train of useful consequences follow the edifying exploits of Winton and Nissen and Mrs. Taylor.

"But we can't get over wishing that Niagara Falls were as high and mighty as they used to be, before last Thursday."

THE EVILS OF SUBSTITUTION.

Much has been said and much has been written on the evils of substitution in the past of druggists in filling physicians' prescriptions. We, surely, may presume that no one will deny that such substitution is wrong in every sense of the word.

A very important question, however, arises. Is such substitution common? In other words, are our druggists honest or dishonest? The writer can only tell what he knows; but he is willing to say, without any hesitation, after a careful observation of over fifteen years, that the druggists of Toronto are, as a rule, honest; and that substitution, at least on the part of the majority, is rare. At the same time we have to admit in the evidence of other careful observers, that such disreputable practice has not grown quite obsolete.

We are told that the State of Tennessee has a law making it a criminal offence, punishable by fine and imprisonment, to substitute any drug in lieu of that prescribed. We quite approve of this, and would like to see such a law enacted in Ontario. It is well, however, to remember that pharmacy in this province is under the control of a strong corporation, composed of competent and conscientious men, who have been for years, and are now using their best endeavors to raise the standard of their profession in all respects. We are glad to say that we have the utmost confidence in this body, and believe that its members will try to have good laws enacted and observed.

SCIENTIFIC RESEARCH.

PUBLICATION FROM MEDICAL FACULTY, UNIVERSITY OF
TORONTO, 1900-1901.

1. "Acute Yellow Atrophy." By Drs. McPhedran and A. B. Macallum, *Brit. Med. Jour.*, 1894. (The knowledge of the pathology of this disease was much advanced. The article has been many times referred to as one of the ablest on the subject, and many of its conclusions have since been corroborated by later German and Russian observers.)

2. "Molluscum Contagiosum." By Drs. J. E. Graham and A. B. Macallum, *Jour. of Cut. and Gen. Urin. Diseases*, March, 1892. (Research conducted on material obtained from outbreak in Infants' Home. The subject of the nature of the molluscum growth was thoroughly investigated.)

3. "The Absorption of Iron in the Animal Body," Cambridge *Jour. of Physiology*, Vol. 16, 1894. By Dr. A. B. Macallum. (This paper settled the question of the absorption of iron in the intestine, a fact which in Germany for the preceding ten years had been doubted and even denied. The results of this work have been fully corroborated by French, German, Italian and Russian observers, and all make mention of this paper in most commendatory terms.)

4. "A New Proteid Reaction." By Dr. J. H. Elliott (George Brown Memorial Scholar Univ. of Toronto, 1896-7), *Jour. of Physiology*, 1897. (A new reaction for proteids, which is now quoted in German text books on physiological chemistry as the "Elliott Reaction," and is of great value and interest.)

5. "On the Structure, Micro-Chemistry and Development of the Nerve Cells, with Special Reference to the Nuclein Compounds." Transaction Canadian Institute, 1900, vol. 6, and No. 1 Physiological Series of the "University of Toronto Studies." (Though published only two years ago, is already quoted in German and Italian original publications at length.)

6. "Observations on Blood Pressure." By Dr. R. D. Rudolf, Transactions Canadian Institute, Vol. 7, No. 3, Physiological Series of the "University of Toronto Studies." (Highly commended by the *London Lancet* in a recent review of the paper.)

7. "On the Anatomy of Orang-Outang." By Dr. Primrose, Transactions of the Canadian Institute, Vov. VI, and No. 1 Anatomical Series of the "University of Toronto Studies."

8. "On the Cytology of Non-Nucleated Organisms." By Dr. A. B. Macallum, Transactions Canadian Institute, Vol. VI, and No. 2 Physiological Series of the "University of Toronto Studies." (This paper gives the results of studies on the structure and chemistry of bacteria, yeasts, etc.)

9. "On the Demonstration of the Presence of Iron in Chromatin by Micro-Chemical Methods." By Dr. A. B. Macallum. "Proceedings of the Royal Society of London, Vol. 50, 1891. (Records the discovery, not only of iron as an organic compound in the nuclei of cells, but also of a method of demonstrating it with certainty, a feat which has not been hitherto accomplished. It is as yet the decisive method of locating organic iron compounds in cells.)

10. "On the Distribution of Assimilated Iron Compounds, other than Hemoglobin and Hematin, in Animal and Vegetable Cells." *Quar. Jour. of Microscopical Science*, Vol. XXXVIII, 1895. (This paper gives the results of four years' study on the localization of iron in animal and vegetable cells, and it is the most complete publication on the subject. The paper has been described as a "masterly" one, and as a "classical" one, and it will probably be for many years the authority on the subject. It is considered by British physiologists as opening up entirely new fields for investigation.)

11. "On the Detection and Localization of Phosphorus in Animal and Vegetable Tissues. By Dr. A. B. Macallum. "Proceedings Royal Society of London," Vol. LXIII, 1898. (This paper gives the results of studies on the method of demonstrating phosphorus and its distribution in animal and vegetable cells. All the results are wholly new.)

12. "On a New Method of Distinguishing Between Organic and Inorganic Compounds of Iron." By Dr. A. B. Macallum, *Jour. of Physiology*, Vol. XXII, 1897. (The paper gives a new and decisive method of distinguishing between organic and inorganic compounds, whether in the test-tube or in the tissue under the microscope, which enables the practitioner to test for himself any of the medical iron preparations put on the market.)

13. "Contributions to the Morphology and Physiology of the Cell." By Dr. A. B. Macallum. *Transactions Canadian Institute*, Vol. I, 1891. (This paper gives the results of studies on cell secretion and its conclusions as to the processes of secretion and the origin of the ferments are now generally accepted. Further, this paper indicated that all the ferments are nucleoproteids, a fact which is now established.)

14. "Studies on the Blood of Amphibia." By Dr. A. B. Macallum. *Transactions Canadian Institute*, Vol. II, 1892. The author found as a result of his investigations that hemoglobin is not formed, as was generally believed, out of inorganic iron and a proteid, but out of an iron holding nucleoproteid called chromatin which occurs in the nucleus of every cell, and abundantly in the nucleus of every undeveloped red blood cell. This has compelled a revision of the accepted view as to the action of iron in anemia and chlorosis as well as a reconsideration of the views as to the genesis of hemoglobin.

15. "On the Chemistry of the Cell." By Dr. A. B. Macallum, British Association Reports, 1899, 1900, 1901. These reports communicated by the author as Secretary of a committee summarize the results of investigations which have been carried on in the Physiological and Pathological departments in the University of Toronto on the composition of cells and tissues.

16. "The Histology and Physiology of the Gastric Glands." By Dr. R. R. Bensley, Proceedings of the Canadian Institute, 1896-7.

17. "The Structure of the Mammalian Gastric Glands," *Quarterly Journal of Microscopical Science*, Vol. XLI, 1898. By Dr. R. R. Bensley. A very important paper giving many new facts regarding the gastric glands and the nature of the process of secretion. It has won already very favorable notice amongst the French and German workers on the subject.

18. "Method of Utilizing Frozen Sections for Class Demonstrations of Visceral Anatomy and Anatomy of the Epiphyses." By Dr. A. Primrose, proceedings of the Association of American Anatomists, fourteenth session, held at Baltimore, Md., December, 1900.

19. "The use of Synthesized Media in the Study of Water Bacteria." By Dr. J. J. MacKenzie, read at the American Congress of Bacteriologists published in the Report of the American Health Association.

20. "On Microchemical studies on the normal nerve cell and upon the pyramidal cell of Rabbits in Rabies." By Dr. J. J. MacKenzie, read at the British Association for the advancement of Science, Toronto, 1898. Abstract in the report of the Association.

21. "On the Micro Chemistry of the Eosinophilous Cell." By J. J. MacKenzie, communicated by Professor Macallum to the International Congress of Physiologists. Abstract in the report of the Congress.

22. "On the Micro Chemistry of Blood Pigments." By Dr. E. N. Coutts, Brown Scholar of the University Medical Faculty, communicated by Professor Macallum to the British Association for the Advancement of Science, Glasgow, 1901. Abstract in the report of the Association.

23. "On a Diphtheria-like bacillus belonging to the Streptothrix group." By Dr. J. J. MacKenzie, read at the Bacteriological Section of the American Public Health Association, 1899. Published in the report.

Professor A. B. Macallum is Secretary of the British Association Committee upon the Micro Chemistry of the Cell, and Professor MacKenzie is a member of that Committee.

Partial list of graduates who have received appointments in other countries:

L. Barker, M.B., Professor of Anatomy, University of Chicago.

R. R. Bensley, B.A., M.B., Assistant Professor of Anatomy, University of Chicago.

D. G. Revell, B.A., M.B., Demonstrator in Anatomy, University of Chicago.

T. Cullen, M.B., Associate Professor of Gynecology, John Hopkins University.

T. B. Futeher, M.B., Associate Professor in Medicine, Johns Hopkins University.

T. McCrae, B.A., M.B., Associate in Medicine, Johns Hopkins University.

N. M. Harris, M.B., Instructor in Bacteriology, Johns Hopkins University.

Hibbert Hill, M.D., Bacteriologist Boston Board of Health.

Dr. D. Pease, M.B., Bacteriologist State of New York.

A. H. Montgomery, B.A., M.B., Assistant in Anatomy, Cornell University.

B. A. Cohoe, B.A., M.B., Assistant in Anatomy, Cornell University.

W. C. White, M.B., Pathologist to the Indiana State Asylums.

Dr. A. Coutts, M.B., Colonial Fellow in Bacteriology, University College, Liverpool.

John McCrae, B.A., M.B., Assistant Pathologist, Montreal General Hospital and Demonstrator of Pathology, McGill University.

Personals.

Professor Wm. Osler, of Baltimore, visited Toronto December 2nd.

Dr. Kennedy McIlwraith, of Toronto, was elected a Fellow of the Obstetrical Society of Edinburgh in November.

Dr. Allen D. Stewart, after acting as surgeon on the steamer *Empress of India* for fourteen months, returned to his home in Toronto, November 7th. After a short holiday he went to Fort William, where he has commenced practice.

At a meeting of the Faculty of Medicine of McGill University, held December 7th, it was unanimously decided to recommend to the University Board of Governors the appointment of Dr. Thos. Roddick as Dean in the place of Dr. Craik, who recently resigned.

Obituary.

MATTHEW LESSLIE SWEETNAM, M.D.

Another worthy member of our profession has succumbed to our dread enemy—septicemia. Dr. Lesslie Sweetnam, of Toronto, was well known as one of our most prominent surgeons. It is likely that for some years he did more major surgical operations than any other surgeon in Canada. For a long time his marvellous powers of endurance appeared to have no limit. His friends, however, frequently recognized the fact that there was a limit, which he had reached some time ago, and freely offered good advice, which was never acted on. He was a general surgeon, but devoted most of his attention to abdominal and gynecological surgery.

Dr. Sweetnam was born in Kingston, August 1st, 1859. He received his preliminary education at Upper Canada College, and pursued his medical studies at the Toronto School of Medicine, graduating M.B. in the University of Toronto, and M.D. in the University of Victoria College in 1881. After graduating he acted as one of the resident physicians of the Toronto General Hospital for one year.

He always took a deep interest in surgery, both in its scientific and practical aspects. He did much post-graduate work both in Europe and the United States. He spent a good portion of his holiday seasons with his most intimate friend, Dr. Howard Kelly, of Baltimore; sometimes in Johns Hopkins Hospital, sometimes in the wilds of Muskoka.

On November 4th he amputated a gangrenous arm at St. Michael's Hospital. During the operation he received a very slight wound on the tip of his forefinger, not enough to cause any blood to flow. He took the precaution to put his finger under running water, then sucked it, and applied carbolic acid. In a day or two he found symptoms of slight septicemia, which, however, did not cause much alarm. On November 13th, nine days after receiving the wound the symptoms became alarming, and he went to Johns Hopkins Hospital, where he was under the care of Drs. Osler, Kelly, Halsted and Cullen. In a few days we heard that all danger was past. Then came a report that he had some serious symptoms with high temperature. Some enlarged glands were removed from the axilla. Then for days came encouraging reports. On December 10th, Mrs. Sweetnam wrote to a friend in Toronto saying her husband was improving slowly

but steadily. A few minutes before this letter reached its destination there came from Dr. Osler a telegram saying that "Sweetnam died this morning after a series of convulsions. He had been perfectly well." It was bad enough to read such a message, but it made it seem doubly sad to turn to the letter from his devoted wife—so brimful of happiness on account of the bright prospects for recovery. Her happy thoughts turned for a time to those who were caring for him she loved. She said: "All the surgeons and doctors have been most kind and sympathetic with us, and we appreciate it thoroughly." Early in the morning of December 11th everything looked favorable until about seven o'clock, when he was seized with a convulsion, and became unconscious. After a number of convulsions he died at nine o'clock. The cause of the convulsions is unknown. It may have been uremia, embolism or thrombosis. The remains were brought to Toronto, and buried on the afternoon of December 13th. The funeral was a very large one, among those present being "all sorts and conditions" of men, women and children. Among those from outside places were Drs. Howard Kelly and Thos. S. Cullen, of Baltimore.

Dr. Sweetnam had been Professor of Surgery in the Ontario Women's Medical College for thirteen years, and Associate Professor of Surgery in the Medical Faculty of the University of Toronto since 1897. He was on the active staff of the General Hospital, St. Michael's Hospital and the House of Providence. He did an enormous amount of work, especially in St. Michael's Hospital, and, in addition, a very large private practice. Apart from his skill as an operator, there was a charm about his kindly manner which went to the hearts of his patients, whether great or small, whether rich or poor. We know of no surgeon or physician who was more highly respected and dearly beloved by his patients than Dr. Sweetnam. It is inexpressibly sad to think that one so active and skilful should have been killed by such a calamitous accident at the early age of forty-two.

Correspondence.

POST-GRADUATE WORK IN TORONTO.

Editor of CANADIAN PRACTITIONER AND REVIEW.

The records show that Toronto has been a seat of education in medicine for fifty-seven years. They likewise show great expansion from the small beginning of a teaching staff of five professors in the Medical Faculty of King's College—now Toronto University—and a first class of a score of medical students in 1844. To-day there are three medical colleges in this city with an equipment of forty-four professors, an immense number of assistants, and an aggregate yearly attendance of upwards of five hundred students. This expansion, however, has been entirely in the direction of educating classes of undergraduates, winding up with University degrees in medicine. Hitherto the college authorities have been contented with this line of activity. Their ambition has reached no farther. They have made no visible practical attempt to furnish provision for polyclinic or post-graduate study, nor yet for carrying on original advanced research in medicine. There is no independent polyclinic in Toronto. I will point out several apparent results.

A regulation of the Provincial Medical Council, passed as long ago as 1892, compels all graduates in medicine who desire registration as legal practitioners in Ontario to spend a year in post-graduate study, and subsequently pass the final examination of the Medical Council to test their proficiency prior to being registered. There is a standing promise, but nothing more in the annual circulars of the Toronto Medical College for the past four years, that a post-graduate course will be arranged.

In the absence of proper provision at Toronto for post-graduate study, these medical graduates are driven to foreign polyclinics for the requisite post-graduate training. Again, all medical graduates of Ontario Universities who intend to devote a year or more to post-graduate work prior to commencing practice outside this Province must seek foreign institutions for this work. Lastly, established Ontario practitioners of medicine who desire to improve themselves in any branches of practice by polyclinic work, must seek a foreign city to accomplish their object.

For the reason that the Toronto University and its Medical College and Trinity University and Medical College, through their representatives in the Provincial Medical Council, participated in the enactment requiring post-graduate study above

referred to, it is a valid contention that among them, in an effectual way, proper provision should be made for such culture. The Toronto Medical College in effect admits the force of this claim by a standing promise in its annual announcements, although as yet it does nothing. Trinity Medical College neither promises nor does anything to supply polyclinic instruction to graduates in medicine. A forced annual exodus accordingly goes on of Ontario medical men to the higher centres of medical learning elsewhere for post-graduate training, contributes to the importance and influence of those higher centres, and causes an expenditure of thousands of dollars yearly outside this Province.

I strongly urge that one of these medical colleges at least should exhibit ambition, spirit of progress and sense of responsibility sufficient to remedy the deficiency under comment, and during the coming year usher into being an active polyclinic. The college itself so doing will rise to a much higher and broader plane of eminence than at present, and the world will give it corresponding recognition.

LUCIUS S. OILLE.

ST. CATHARINES, November 29th, 1901.

[As pointed out elsewhere in this issue, the University of Toronto has made provision for advanced research in medicine, and hopes to do still more in that direction after the erection, next year, of a new building, at a cost of one hundred thousand dollars. We agree with Dr. Oille's contention that some further provision should be made for post-graduate study. At the same time it should be remembered that graduates, during the last few years have, to some extent, "walked the hospitals" of Toronto. A certain amount of post-graduate laboratory work is being done in Toronto every year.—EDITOR.]

THE LONDON TUBERCULOSIS CONGRESS.

Editor of CANADIAN PRACTITIONER AND REVIEW.

SIR,—In reply to Dr. Oille's letter in the last issue of the *PRACTITIONER*, permit me to say that modesty would have prevented reference to any part I might have taken in the deliberations of the Congress. Many of the most eminent men there took no active part, so that as a listener I was in excellent company.

As to the Faculty of Medicine of the University of Toronto not having sent a representative, the criticism is quite unjust. So far as I am aware no other similar institution had repre-

sentatives present. A few delegates registered as members of Universities without having been expressly delegated, and I might have done so likewise had it occurred to me that such was desirable. I might also have offered some remarks in a few of the discussions, or even prepared a paper, had I thought that by so doing the University and the Faculty of Medicine would have been saved animadversion, or their reputation materially enhanced.

I may furthermore point out that there are important congresses and meetings being held from time to time, such as the British Association for the Advancement of Science, the International Congress of Physiology, etc., at which it would be both pleasant and profitable for the Faculty to be represented, but the expense of sending delegates would, I fear, be more than it can well bear. Of course if any friends can see their way clear to provide the wherewithal, the Faculty will be delighted to send the delegates, and will see to it, too, that they do their part in "upholding the standing and authority of this centre of Medical Science"

Yours sincerely,

A. MCPHEDRAN.

151 BLOOR STREET W., December 1st, 1901.

Book Reviews.

Gonorrheal Arthritis—Its Pathology, Symptoms and Treatment—By L. VERNON JONES, M.D., Cr. 8vo., 82 pages. Price 2s. 6d. Published by H. K. Lewis, 136 Gower Street, London, W. C.

The idea of publishing small volumes on special subjects is a good one. Many a man is able to write a short treatise on some special subject that he has paid particular attention to, with the greatest advantage to his *confrères*—while the publishing of a large volume on general medicine would not be his fort nor needed. The reading public will appreciate the lesser volume and accept with pleasure the opinion expressed. Dr. L. Vernon Jones has written a *brochure* on gonorrheal arthritis which is timely and should be convincing. The author's idea that the term gonorrheal rheumatism is erroneous and misleading and should not be used, seems to be correct. His line of treatment is simple yet thorough. We have, however, used in this affection with some success, hexa methylene tetramine, and would like to see it included in the next edition of the volume. The book is neatly gotten up and published at a most reasonable cost.

Dose-Book and Manual of Prescription-Writing. With a List of the Official Drugs and Preparations, and the more important Newer Remedies. By E. Q. THORNTON, M.D., Demonstrator of Therapeutics, Jefferson Medical College, Philadelphia. Second Edition, Revised and Enlarged. Octavo, 362 pages. Illustrated. Philadelphia and London W. B. Saunders & Co., 1901. Canadian Agents: J. A. Carveth & Co., Toronto. Bound in flexible leather. \$2.00 net.

This work is intended for the student of medicine both during his years of study as an undergraduate and in the early period of his professional career. The volume will also prove of value to the practitioner of many years' standing for purposes of reference. In the revision additions have been made to the chapters on "Prescription-Writing" and "Incompatibilities," and references have been introduced in the text to the newer curative sera, organic extracts, synthetic compounds, and vegetable drugs. To the Appendix, chapters upon Synonyms and Poisons and their antidotes have been added.

In addition to the consideration of the composition strength of all official preparations, space is given to the grammatical construction of prescriptions, accompanied by example prescriptions, illustrating some of the methods of employing the different classes of remedies. It is in all respects an admirable book both for students and general practitioners.

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publisher, offers to the purchaser many advantages which will be appreciated by those who do not care to subscribe for the entire work at one time. This American edition of Nothnagel's Encyclopedia will, without question, form the greatest system of medicine ever produced, and the publishers feel confident that it will meet with general favor in the medical profession.

Anatomy: Descriptive and Surgical. By HENRY GRAY, F.R.S., Fellow of the Royal College of Surgeons, Lecturer on Anatomy at St. George's Hospital Medical School. Edited by T. Pickering Pick, F.R.C.S., Consulting Surgeon at St. George's Hospital and to the Victoria Hospital for Children, H. M. Inspector of Anatomy in England and Wales; and Robert Howden, M.A., M.B., C.M., Professor of Anatomy in the University of Durham, Examiner in Anatomy in the Universities of Durham and Edinburgh, and to the Board of Education, South Kensington. A revised American, from the fifteenth English edition, with 780 illustrations, many of which are new. Philadelphia and New York: Lea Brothers & Co.

It is almost needless to review a work that is so widely known as Gray's Anatomy, yet it is important to review the work because it has served as a basis for the study of anatomy so many years. No graduate in medicine in the past forty years is unacquainted with Gray. It is really remarkable that any volume should have stood the test of time as this one has done. It is to-day recognized as one of the best authorities on anatomy extant, and a recognized text-book in all of the principal medical colleges of the world. There is no doubt that even the study of anatomy is advancing, and in this revision of the fifteenth English edition there have been additions of importance, especially in the chapter of embryology. We can recommend this work to every student, and many old practitioners would benefit by purchasing the new edition, if only for the exceedingly good illustrations that have been added to the volume. We hope some day to see added to Gray a chapter on frozen sections, which is a particularly fine method of studying anatomy, and we feel satisfied that in some future edition of Gray this method will be adapted and chapters devoted to the anatomical study as seen in frozen sections. The press work, typography and binding are all of the excellent quality that Lea Brothers & Co. always put forth.

The Physician's Visiting List for 1902. Fifty-first year of its publication. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street.

For many years it has been our pleasure to speak in the highest terms of Blakiston's visiting list. We have before us the list for 1902. It is quite equal to any that have preceded it, and second to none among the many excellent visiting lists published in recent years. In fact the writer prefers this above all others

Materia Medica and Therapeutics.

PHTHISIS AND ITS TREATMENT.

PHTHISIS is pre-eminently a wasting disease, and by exalting failing nutrition, cod liver oil being little more than a given food, a great advance was made in therapeutics. It has been found, however, that the oil does not in many cases meet the indications; for not only is nourishment needed, but the digestive power is so reduced that but little use is made of the food taken. Hence a demand both for nutritious material and also for something which will aid food suitable for assimilation. The clinical starting-point in the history of the greater number of cases of phthisis is malnutrition, and when that is guarded against much is accomplished.

After a full trial of the different oils and extracts of malt preparations in both hospital and private practice, I find Maltine most applicable to the largest number of patients, and superior to any remedy of its class. Theoretically we would expect this preparation, which has become PRACTICALLY OFFICINAL, to be of great value in chronic conditions of waste and malnutrition, especially as exemplified in phthisis. Being rich in *diastase*, *albuminoids* and *phosphates* according to careful analysis, it aids in digesting farinaceous food, while in itself it is a brain, nerve and muscle producer.

In practice this hypothesis is sustained. A female patient in St. Luke's Hospital, aged 35, with phthisis, signs of deposit in left upper lobe, losing flesh for six months, poor appetite and night sweats, was put upon Maltine. Within a few weeks her weight was increased to 121 pounds, she ate well, no night sweats, and the evidences of local disease were much less marked.

Another case of phthisis: A gentleman from Alabama, with all the physical signs of phthisis, rapidly losing health and strength. His was the remarkable gain of 10 lbs. *from six weeks' use of Maltine.*

Seven pounds' increase in as many weeks is the record of a third patient, a lady of 41 years, who had no other medication than the Maltine. In these and other cases the increase in strength and mental vigor was in proportion to the gain in weight.

These instances are sufficient for illustration, and are *duplicated many times in the experience of physicians everywhere.* There is a universal reluctance always to testify to results from medicinal preparations, but when, as in this case, the composition is fully known, and the profession invited to investigate the manner of preparing it, there is no reason why the remedy should not receive general approbation, provided it be worthy.—*Quarterly Epitome of Practical Medicine and Surgery.*

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Progressive Medicine. A quarterly digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Drs. H. A. Hare and H. R. M. Landis. Vol. III, September, 1901. Lea Brothers & Co., Philadelphia and New York.

This volume contains a careful review for the quarter of Diseases of the Lungs, Heart and Blood Vessels by Dr. Wm. Ewart; Dermatology and Syphilis, by Dr. W. S. Gottheil; Diseases of the Nervous System, by Dr. W. G. Spillen, and Obstetrics, by Dr. R. C. Norris.

The articles are all of a high order of merit. The writers of the above reviews of the quarter's progress are all well known authors and writers. The busy practitioner will always find in "Progressive Medicine" a good work of reference. The volume is gotten up in its usual attractive form. We can recommend, not only this volume, but the whole series.

International Clinics. A quarterly of Clinical Lectures and especially prepared articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and other topics of interest to students and practitioners, by leading members of the Medical Profession throughout the world. Edited by Drs. Cattell, Murphy, Blackader, Wood, Rotch, Landott, Morton, Reed, Ballantyne and Harold, with correspondence in London, Montreal, Paris, Leipsic and Vienna. Vol. I, eleventh series, 1901. Philadelphia: J. B. Lippincott & Co.

The lectures on the various subjects of the volume are of much interest. The volume contains much valuable information. The summary at the end of the volume has been prepared with a good deal of care, and gives a very fair estimate of the most important advances during the year 1900. The publishers have performed their part well. The volume contains a number of plates, which have been executed with fidelity. To those who wish to keep themselves up to date, these clinics are always welcome.

The Primary Intradural Tumors of the Optic Nerve. By W. G. M. BYERS, Assistant Oculist and Aurist, Royal Victoria Hospital; Demonstrator in Ophthalmology, McGill University.

In this well printed, well illustrated monograph of eighty-two pages we have an excellent study of these tumors. Optic nerve tumors may be primary, *i.e.*, springing from the nerve itself, or secondary, those which involve the nerve by extension from contiguous parts. The primary tumors are intradural when growing within the dural sheath, or extradural, if growing from the outer surface of the dura. The study in this paper is only of the intradural tumors.

Up to a very recent period, these tumors were classified in various ways. Some were supposed to be neuromas, *i.e.*, formed of or containing nerve fibres, others as gliomas (formed of glia cells), others as sarcomatous, etc. But Byers, by a careful study

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of some cases of his own, and by a most exhaustive examination of recorded cases, has been able to simplify the nomenclature very much, and to render clear an otherwise confusing subject.

The optic nerve contains three elements, viz., the nerve fibres, the neuroglia, and the connective tissue.

All intradural tumors, of course, possess a capsuli (the dura), but the core of these tumors does not consist of nerve filament, (therefore they are not neuromata), nor of neuraglia (therefore not gliomatous), but of the connective tissue itself. In fact the intradural tumors of the optic nerve are connective tissue overgrowths, and should be placed under the heading of Fibromatosis. Many other important points are discussed, one of which is the effect of these tumors upon the nerve fibres. These undergo an early and marked degeneration—which accounts for the early loss of vision in a case of intradural tumor. The symptomatology is given, which may be thus summarized :

1. There is exophthalmos (abnormal protrusion of the eyeball).
2. The development of the protrusion is slow and even.
3. It is as a rule painless.
4. The function of the optic nerve is profoundly disturbed as shown by (a) loss of vision ; (b) ophthalmoscopic changes.
5. There are muscular anomalies.

The diagnosis depends principally upon

1. The proptosis.
2. An early and profound reduction of vision.

Taken together these two symptoms alone are almost proof positive of the presence of an intradural tumor.

The prognosis must be looked upon as more serious than it has hitherto been regarded, not so much from the danger of recurrence but from the continued development of the intracranial portion of the tumor which it is impossible to remove at the time of operation.

The treatment can only be by operation, of which two methods are spoken, viz. : the one by Knapp and that by Krönlein. The author favors the latter.

No one who is interested in this subject should fail to obtain a copy of this admirable monograph, than which there is nothing better published on this subject.

J. T. D.

The Pocket Gray : or, Anatomist's Vade-Mecum. By the late EDWARD COTTERELL, F.R.C.S. Fifth edition, revised and edited by C. H. Fagge, M.B., M.S., Lond., F.R.C.S., Senior Demonstrator of Anatomy, Guy's Hospital. Twentieth thousand. 269 pages. Fcap. 8vo. Price, 3/6 net. London, Eng. : Bailliere, Tindall & Cox, 8 Henrietta Street, Strand.

The present volume is not issued because of any new material contained therein, but from the previous edition being

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